DVD Player

DVP3350K

Service

Service

Service

DVP3350K/93
DVP3350K/77
DVP3350K/96

Service Manual

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**CLASS 1
LASER PRODUCT**

Published by FK-0902 BU AVM Printed in The Netherlands Subject to modification

GB 3141 785 33410

Version 1.0

PHILIPS

Specification for DVP3350K/93

Note

- Specification and design are subject to change without notice.

Accessories supplied
- Remote control and batteries
- Audio/video cables
- AC Power cable
- User Manual

Playback media
- DVD-Video, Video CD/SVCD, Audio CD, CD-R/ CD-RW, DVD+R/+RW, DVD-R/-RW, DivX-CD, Picture CD, MP3-CD, WMA-CD, USB flash drive

USB
- Compatibility: Hi-Speed USB (2.0)
- Class support: UMS (USB Mass Storage Class)

TV standard
- Number of lines:
  - 625 (PAL/50Hz); 525 (NTSC/60Hz)
- Playback: Multi-standard (PAL/NTSC)

Video performance
- Video DAC: 12 bits, 108 MHz
- Y Pb Pr: 0.7 Vpp ~ 75 ohm
- Video output: 1 Vpp ~ 75 ohm

Video format
- Digital compression:
  - MPEG 2: DVD/SVCD
  - MPEG 1: VCD/DivX
- Horizontal resolution:
  - DVD: 720 pixels (50 Hz); 720 pixels (60 Hz)
  - VCD: 352 pixels (50 Hz); 352 pixels (60 Hz)
- Vertical resolution:
  - DVD: 576 lines (50 Hz); 480 lines (60 Hz)
  - VCD: 288 lines (50 Hz); 240 lines (60 Hz)

Audio performance
- DA converter: 24 bits, 192 kHz
- Frequency response:
  - DVD: 4 Hz - 22 kHz (48 kHz); 4 Hz - 44 kHz (96 kHz)
  - SVCD: 4 Hz - 20 kHz (44.1 kHz); 4 Hz - 22 kHz (48 kHz)
  - CD/VCD: 4 Hz - 20 kHz (44.1 kHz)
- Signal-Noise (1 kHz): > 90 dB
- Dynamic range (1 kHz): > 80 dB
- Crosstalk (1 kHz): > 70 dB
- Distortion/noise (1 kHz): > 65 dB
- MPEG MP3: MPEG Audio L3

Audio format
- Digital:
  - MPEG/AC-3/PCM: Compressed digital (16, 20, 24 bits fs, 44.1, 48, 96 kHz)
  - MP3 (ISO 9660): 96, 112, 128, 256 kbps & variable bit rate fs, 32, 44.1, 48 kHz
- Analog sound stereo
- Dolby surround compatible downmix from Dolby Digital multi-channel sound

Connections
- Y Pb Pr output: Cinch 3x
- Video output: Cinch (yellow)
- Audio output (L+R): Cinch (white/red)
- Digital output:
  - 1 coaxial: IEC60958 for CDDA/LPCM; IEC61937 for MPEG 1/2, Dolby Digital

Main unit
- Dimensions (w x h x d): 360 x 38 x 203 (mm)
- Net Weight: approximately 1.3 kg

Power
- Power supply rating: 110 V - 240V; 50/60 Hz
- Power consumption: < 10 W
- Power consumption in standby mode: < 1 W

Laser Specification
- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

Specification for DVP3350K/77

Note

- Specification and design are subject to change without notice.

Accessories supplied
- Remote control and batteries
- Audio/video cables
- Power cable
- Flat pin adaptor (except for Argentina)

Playback media
- DVD-Video, Video CD/SVCD, Audio CD, CD-R/CD-RW, DVD+R/+RW, DVD-R/-RW, DivX-CD, Picture CD, MP3-CD, WMA-CD, USB flash drive

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- Beam divergence: 60 degrees

Specification

for DVP3350K/96 & DVP3350K/98

Note

- Specification and design are subject to change without notice.

Accessories supplied

- Remote control and batteries
- Audio/video cables
- Power cable (except for Taiwan)

Playback media

- DVD-Video, Video CD/SVCD, Audio CD, CD-R/CD-RW, DVD+R/+RW, DVD-R/-RW, DivX-CD, Picture CD, MP3-CD, WMA-CD, USB flash drive

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- Beam divergence: 60 degrees

Safety instruction, Warning & Notes

Safety instruction

1. General safety

Safety regulations require that during a repair:

. Connect the unit to the mains via an isolation transformer.

. Replace safety components indicated by the symbol ⚠, only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that after a repair, you must return the unit in its original condition. Pay, in particular, attention to the following points:

. Route the wires/cables correctly, and fix them with the mounted cable clamps.

. Check the insulation of the mains lead for external damage.

. Check the electrical DC resistance between the mains plug and the secondary side:

1) Unplug the mains cord, and connect a wire between the two pins of the mains plug.
2) Set the mains switch the "on" position (keep the mains cord unplug).
3) Measure the resistance value between the mains plug and the front panel, controls, and chassis bottom.
4) Repair or correct unit when the resistance measurement is less than 1MΩ.
5) Verify this, before you return the unit to the customer/user (ref. UL-standard no. 1492).
6) Switch the unit "off", and remove the wire between the two pins of the mains plug.

2.Laser safety

This unit employs a laser. Only qualified service personnel may remove the cover, or attempt to service this device (due to possible eye injury).

Laser device unit

Type : Semiconductor laser GaAlAs

Wavelength : 650nm (DVD)

: 780nm (VCD/CD)

Output power : 7mW (DVD)

: 10mW (DVD /CD)

Beam divergence: 60 degree

Note: Use of controls or adjustments or performance of procedure other than those specified herein, may result in hazardous radiation exposure. Avoid direct exposure to beam.

Warning

1.General

. All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handing during repair can reduce life drastically. Make sure that, during repair, you are at the same potential as the mass of the set by a wristband with resistance. Keep components and tools at this same potential. Available ESD protection equipment:

1) Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
2) Wristband tester 4822 344 13999.

. Be careful during measurements in the live voltage section. The primary side of the power supply , including the heat sink, carries live mains voltage when you connect the player to the mains (even when the player is “off”!). It is possible to touch copper tracks and/or components in this unshielded primary area, when you service the player. Service personnel must take precautions to prevent touching this area or components in this area. A “lighting stroke” and a stripe-marked printing on the printed wiring board, indicate the primary side of the power supply.

. Never replace modules, or components, while the unit is “on”.

2. Laser

. The use of optical instruments with this product, will increase eye hazard.

. Only qualified service personnel may remove the cover or attempt to service this device, due to possible eye injury.

. Repair handing should take place as much as possible with a disc loaded inside the player.

. Text below is placed inside the unit, on the laser cover shield:

CAUTION: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO BEAM.

Notes: Manufactured under licence from Dolby Laboratories. The double-D symbol is trademarks of Dolby Laboratories, Inc. All rights reserved.

Notes

Lead-Free requirement for service

INDENTIFICATION:

Regardless of special logo (not always indicated)

One must treat all sets from 1.1.2005 onwards, according next rules.

Important note: In fact also products a little older can also be treated in this way as long as you avoid mixing solder-alloys (leaded/ lead-free). So best to always use SAC305 and the higher temperatures belong to this.

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free solder alloy Philips SAC305 with order code 0622 149 00106. If lead-free solder-paste is required, please contact the manufacturer of your solder-equipment. In general use of solder-paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
  - To reach at least a solder-temperature of 400°C,
  - To stabilize the adjusted temperature at the solder-tip
  - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature around 360°C – 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
- Mix of lead-free solder alloy / parts with leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed
  solder alloy types (leaded and lead-free). If one cannot avoid, clean carefully the
  solder-joint from old solder alloy and re-solder with new solder alloy (SAC305).
- Use only original spare-parts listed in the Service-Manuals. Not listed standard-material (commodities) has to be purchased at external companies.
- Special information for BGA-ICs:
  - always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use highest lead-free temperature profile, in case of doubt)
  - lead free BGA-ICs will be delivered in so-called 'dry-packaging' (sealed pack including a silica gel pack) to protect the IC against moisture. After opening, dependent of MSL-level seen on indicator-label in the bag, the BGA-IC possibly still has to be baked dry. This will be communicated via AYS-website.
  Do not re-use BGAs at all.
- For sets produced before 1.1.2005, containing leaded soldering-tin and components, all needed spare-parts will be available till the end of the service-period. For repair of such sets nothing changes.
- On our website:
  www.atyourservice.ce.Philips.com

You find more information to:

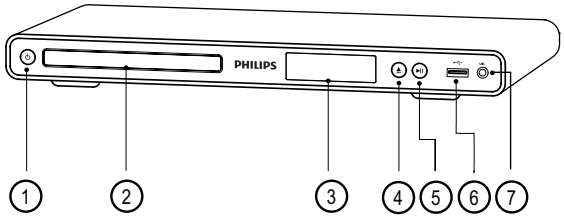
BGA-de-/soldering (+ baking instructions)
Heating-profiles of BGAs and other ICs used in Philips-sets

You will find this and more technical information within the "magazine", chapter "workshop news".

For additional questions please contact your local repair-helpdesk.

DFU Instruction

Main unit



① ⏻ (Standby-on)
- Turn on the DVD player or switch to standby mode.

② Disc compartment

③ Display panel

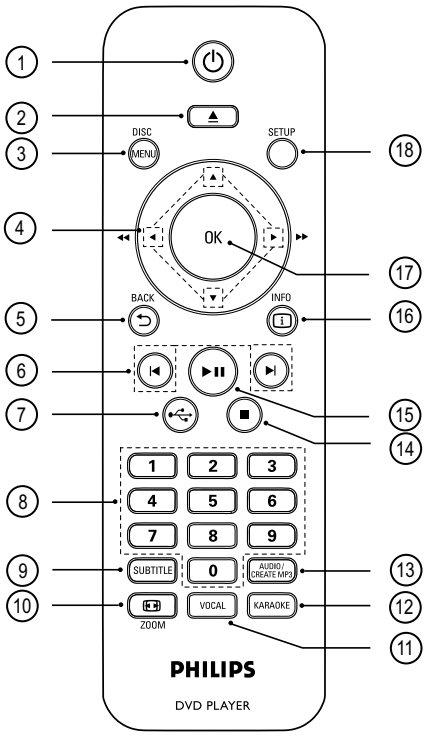
④ ⏏ (Open/Close)
- Open or close the disc compartment.

⑤ ⏯ (Play/Pause)
- Start, pause or resume disc play.

⑥ ⇻ (USB) jack
- Connect a USB flash drive.

⑦ MIC
- Audio input from a microphone.

Remote control



① ⏻ (Standby-On)
- Turn on the DVD player or switch to standby mode.

② ⏏ (Open/Close)
- Open or close the disc compartment.

③ DISC MENU
- Access or exit the disc menu.
- Switch to disc mode.
- For VCD/SVCD, turn PBC (Playback Control) on or off in PBC mode.

④ ▲▼◄► (Navigation buttons)

- Navigate through the menus.
- Search fast-forward (►) or fast-backward (◄). Press repeatedly to change the search speed.
- Search slow-forward (▲) or slow-backward (▼). Press repeatedly to change the search speed.

⑤ ⮌ BACK

- Return to the previous display menu.
- For DVD, navigate to the title menu.
- For VCD version 2.0 or SVCD with PBC turned on, return to the menu.

⑥ ⏮/⏭ (Previous/Next)

- Skip to the previous or next title, chapter, or track.
- Press and hold for fast-backward or fast-forward search.

⑦ •⇨ (USB)

- Switch to USB mode and display the content.

⑧ Numeric buttons

- Select an item to play.

⑨ SUBTITLE

- Select DVD or DivX subtitle language.
- Access the menu to USB copy or USB delete.

⑩ ZOOM

- Fit the picture format to the TV screen.
- Zoom in or out of the picture.

⑪ VOCAL

- Change the audio channel of a karaoke disc.

⑫ KARAOKE

- Access or exit the karaoke menu.

⑬ AUDIO/CREATE MP3

- Select an audio language/channel.
- Access the menu to create MP3.

⑭ ■ (Stop)

- Stop disc play.

⑮ ⏯ (Play/Pause)

- Start, pause or resume disc play.

⑯ INFO

- For disc, display the current status or disc information.
- For slideshows, display a thumbnail view of photo files.

⑰ OK

- Confirm an entry or selection.

⑱ SETUP

- Access or exit the setup menu.

Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

The following guidelines show how to dismantle the player.
Step1: Remove 5 screws around the Top Cover, and then remove the Top Cover (Figure 1).

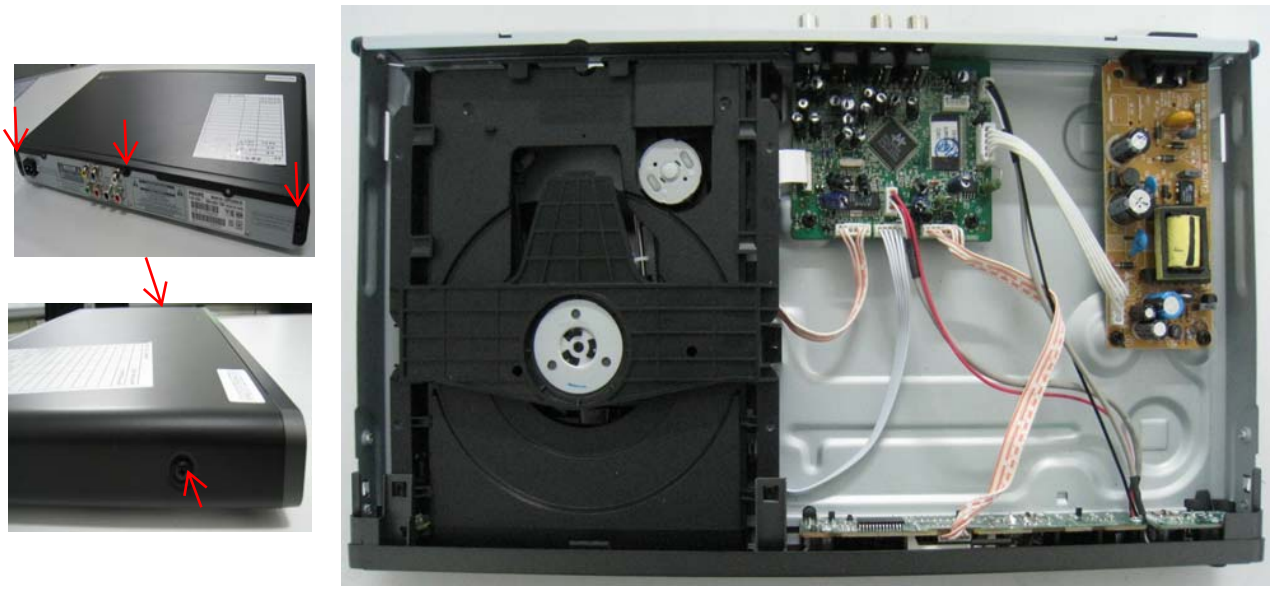


Figure 1

Step2: If it is necessary to dismantle Loader or Front Panel, the Front door should be removed first. (Figure 2)
Note: Make sure to operate gently otherwise the guider would be damaged.

Please kindly note that dismantle the front door assembly carefully to avoid damage tray and the front door.

Figure 2

Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

Step3: If the tray can't open in normal way, you can make it through the instruction as below (Figure 3).
Note: Make sure to operate gently otherwise the guider would be damaged.

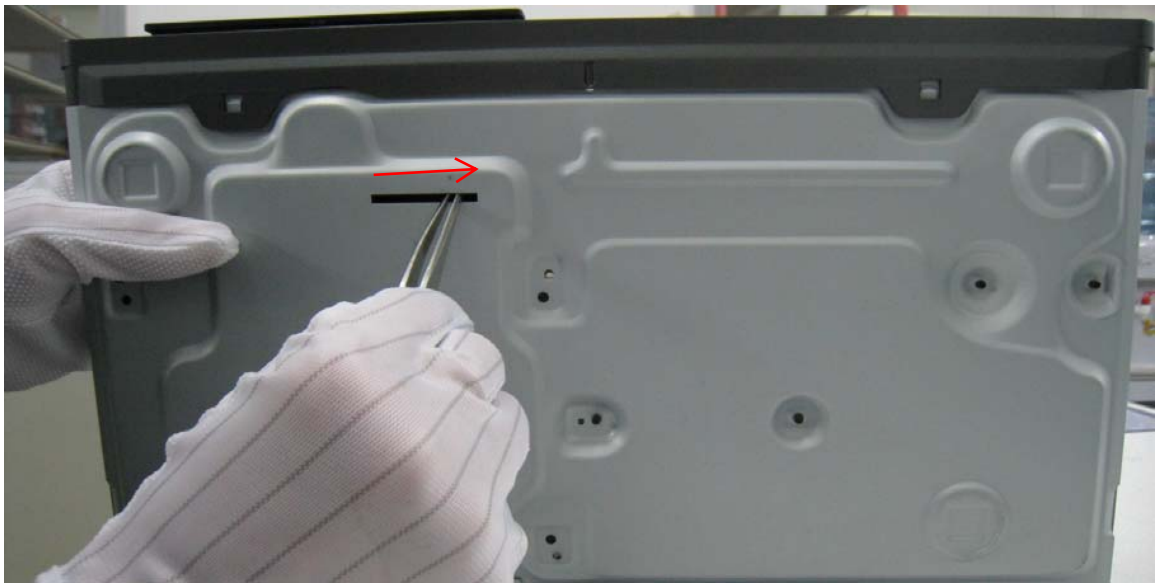


Figure 3

Step4: Dismantling Front Panel, disconnect the connectors (XP5, XP6. XP7), need release 4 snaps of Front Panel and 2 snaps of bottom cabinet , then gently pull the Panel out from the set. (Figure 4 - Figure 6)

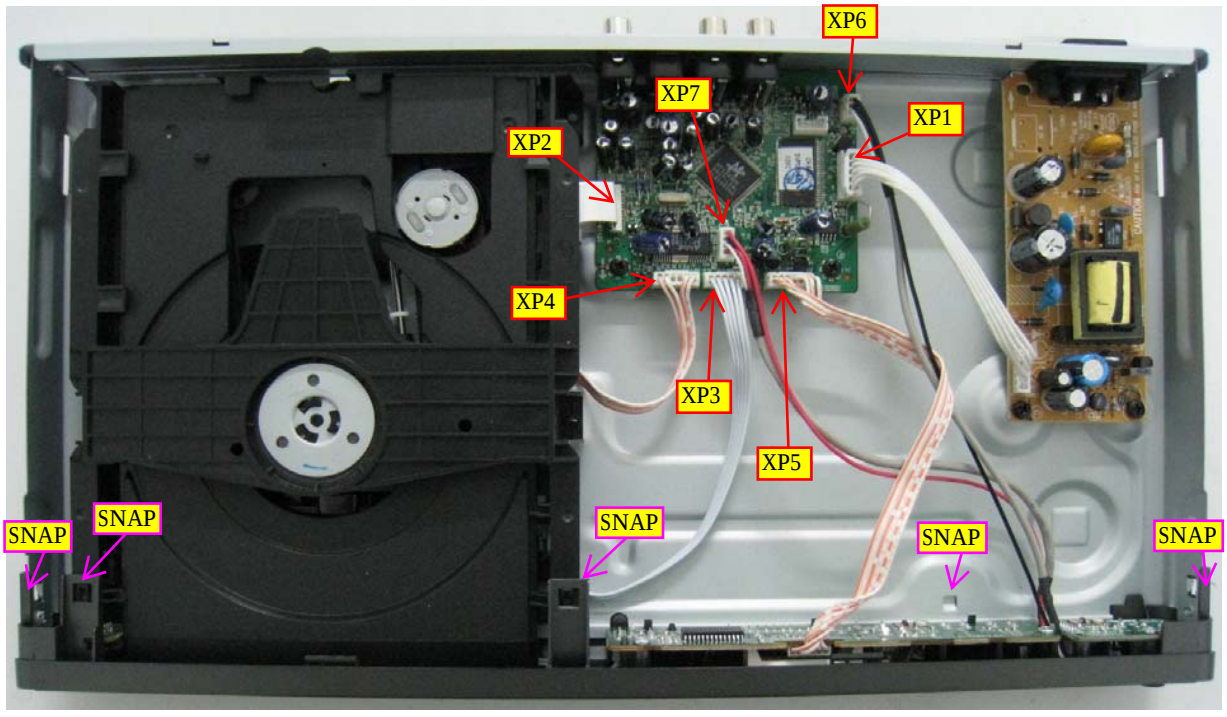


Figure 4

Mechanical and Dismantling Instructions

Dismantling Instruction Detailed information please refer to the model set.

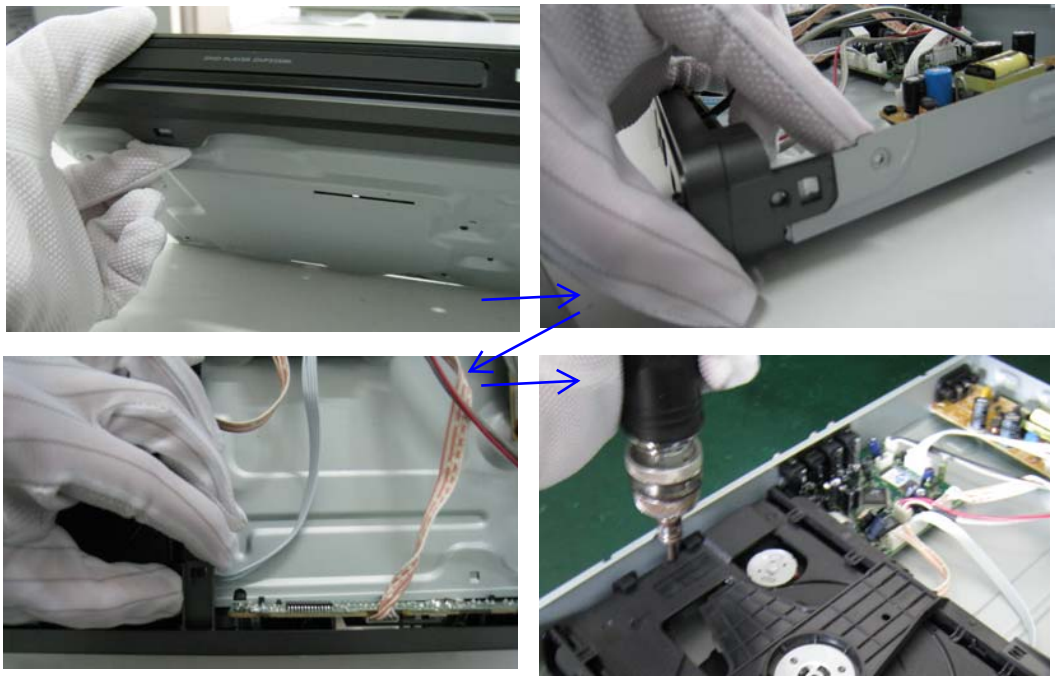


Figure 5

Step5: Dismantling Loader, disconnect the 3 connectors (XP2, XP3, XP4) aiming in the below figure, and remove 1 screw that connects the loader and the bottom cabinet. (Figure 5 & 6)

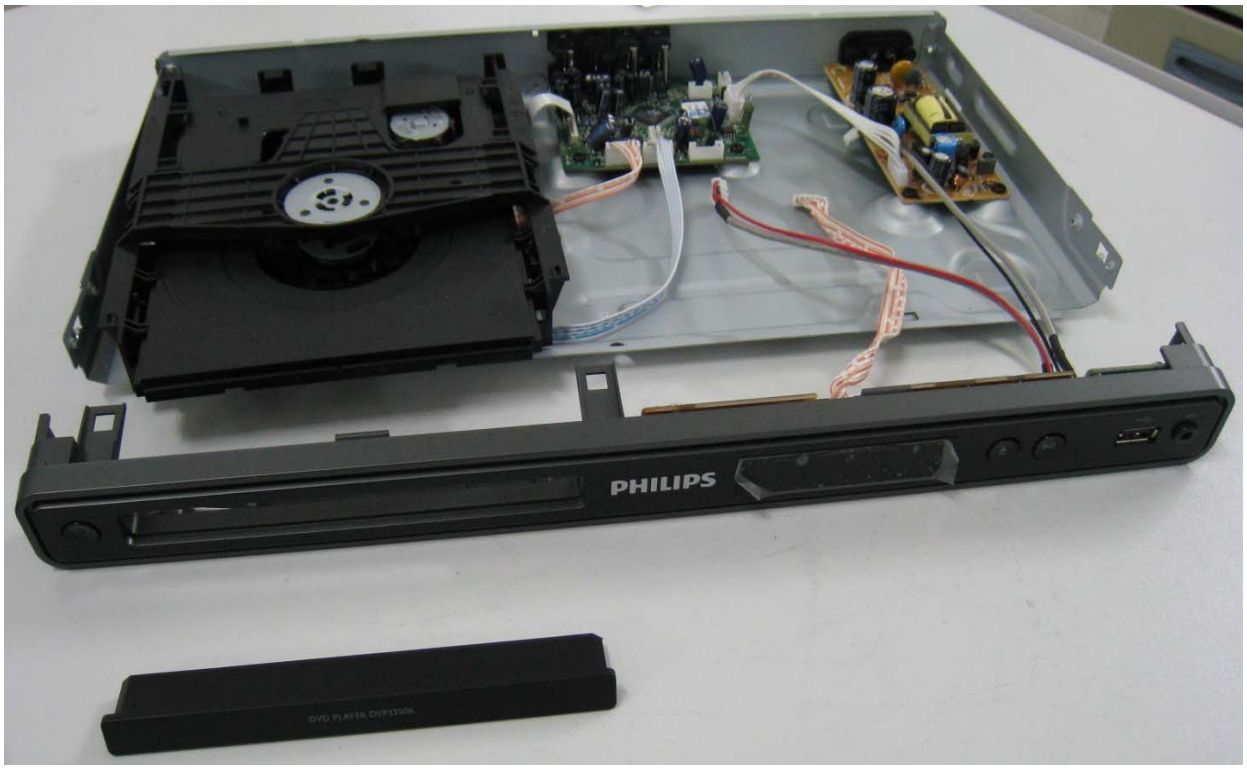


Figure 6

Mechanical and Dismantling Instructions

Dismantling Instruction Detailed information please refer to the model set.

Step6: Dismantling Main Board, first disconnect the connector (XP1), and then remove 4 screws. (Figure 7)

Step7: Remove the 2 screws on Power Board to dismantle the Power Board. (Figure 7)

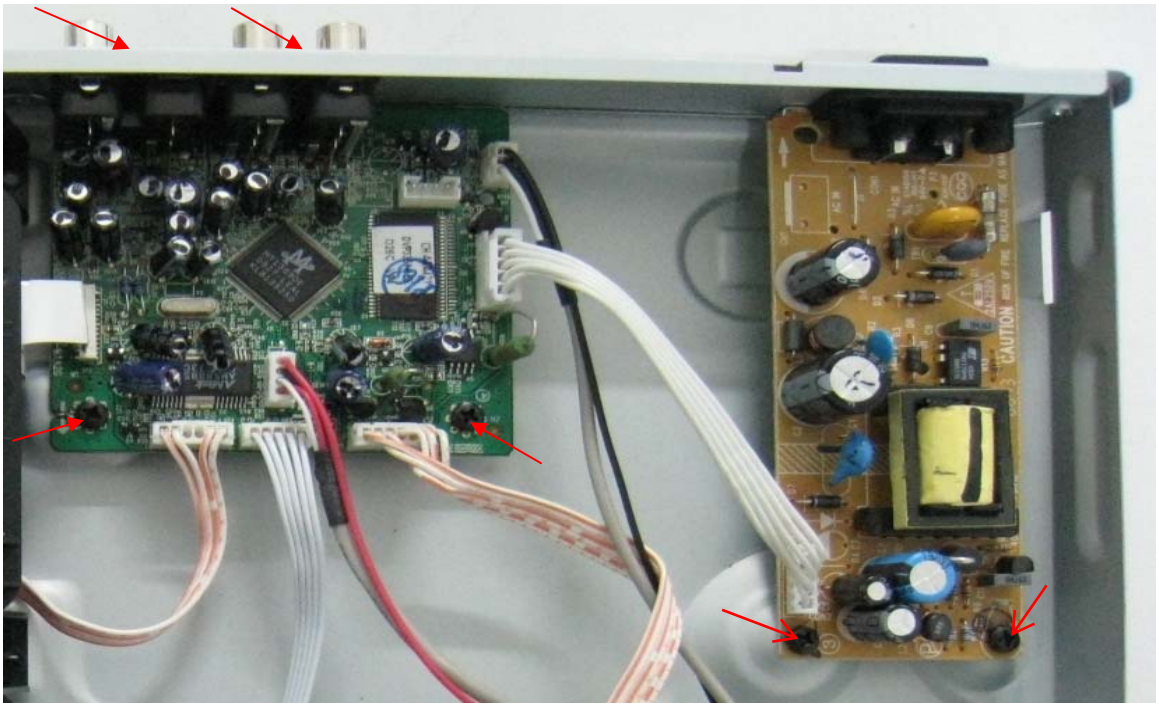


Figure 7

Software upgrade

Preparation to upgrade software *

1) Start the CD Burning software and create a new CD project (Data Disc) with the following setting:
   Label: DVP3XXXX (No need the label name)
   File Name: DVPXXXXX_XX.BIN
   Power on the set and open the tray, then press <5><5> to check the File Name.

Note: It is required capital letter for the File System name.

2) Burn the data onto a blank CDR

A. Procedure for software upgrade:

1) Power on the set and insert the prepared Upgrade CDR.
2) The set will starts reading disc & response with the following display TV screen:
   Upgrade File DETECTED
   Upgrade?
   Press Play TO START.
3) Press <OK> button to confirm, then screen will display :
   Files coping…
   UPGRADING…
4) The upgraded tray will automatically open when files coping complete, then take out the disc.
5) About 1 minute later, the trace will automatically close when upgrading complete.

B. Read out the software versions to confirm upgrading

1) Power on the set and press <Setup> button on the remote control.
2) Press<1><3><7><9> button or press down cursor on remote control to choose "Preference" and press right & down cursors to choose "Version Info".

The software version and other information are display on the TV screen as follows:

Model	DVP33XXX XX
File Name	DVP33XXX XX.BIN
Version	XX.XX.XX.XX
RISC	XX.XX.XX.XX
Servo	XX.XX.XX.XX
Region Code	X
HDCP	PASS(except press<1><3><7><9>)

* The other upgrade SW way is by memory, the steps are the same as CDR's, create the upgrade file into memory, and connect the USB flash drive to the USB socket on set, then press "USB" on remote control to access the content and play the upgrade file as above upgrade procedure.

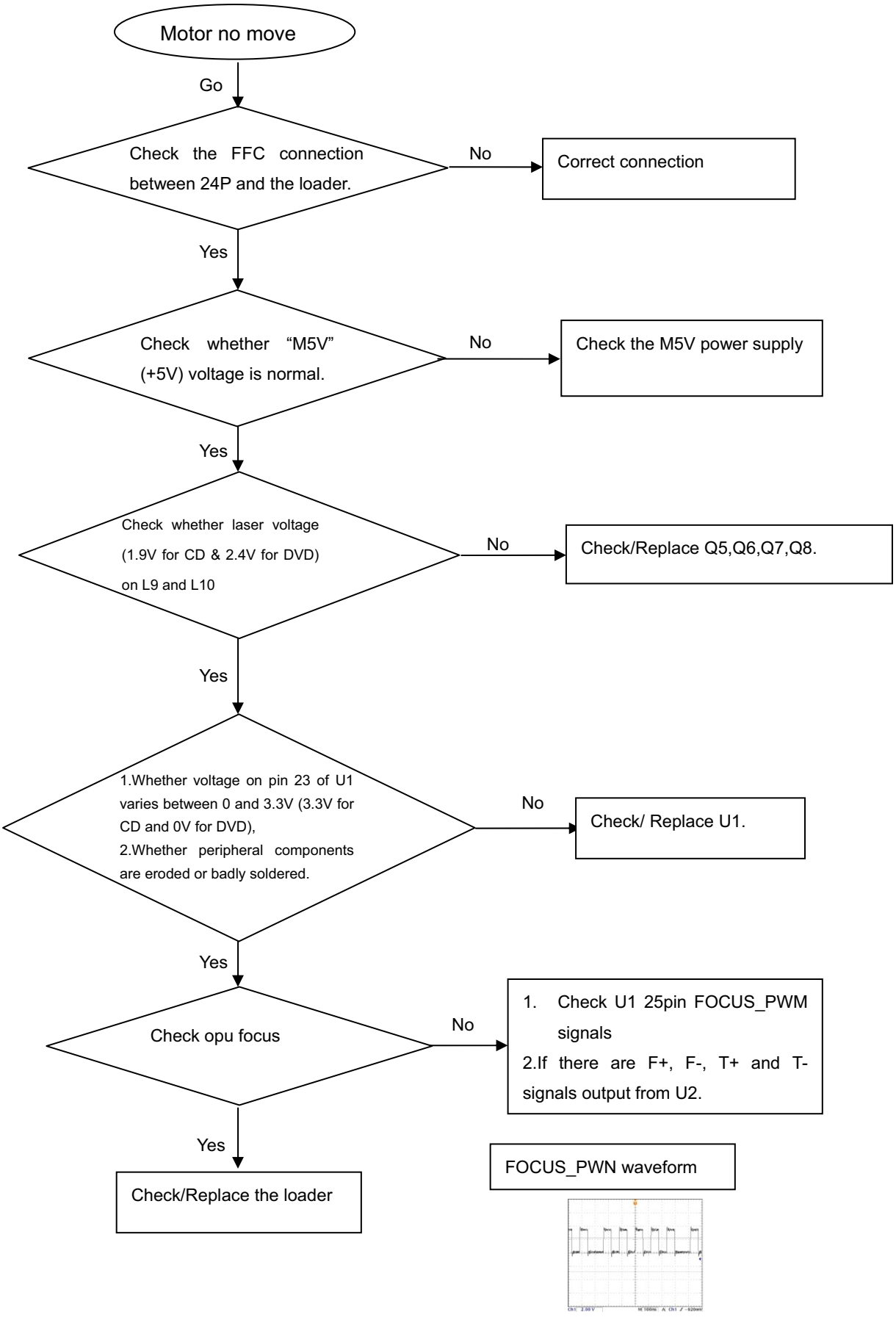
Caution: The set must not be power off during upgrading, Otherwise the Main board will be damaged entirely.

Region Code Change

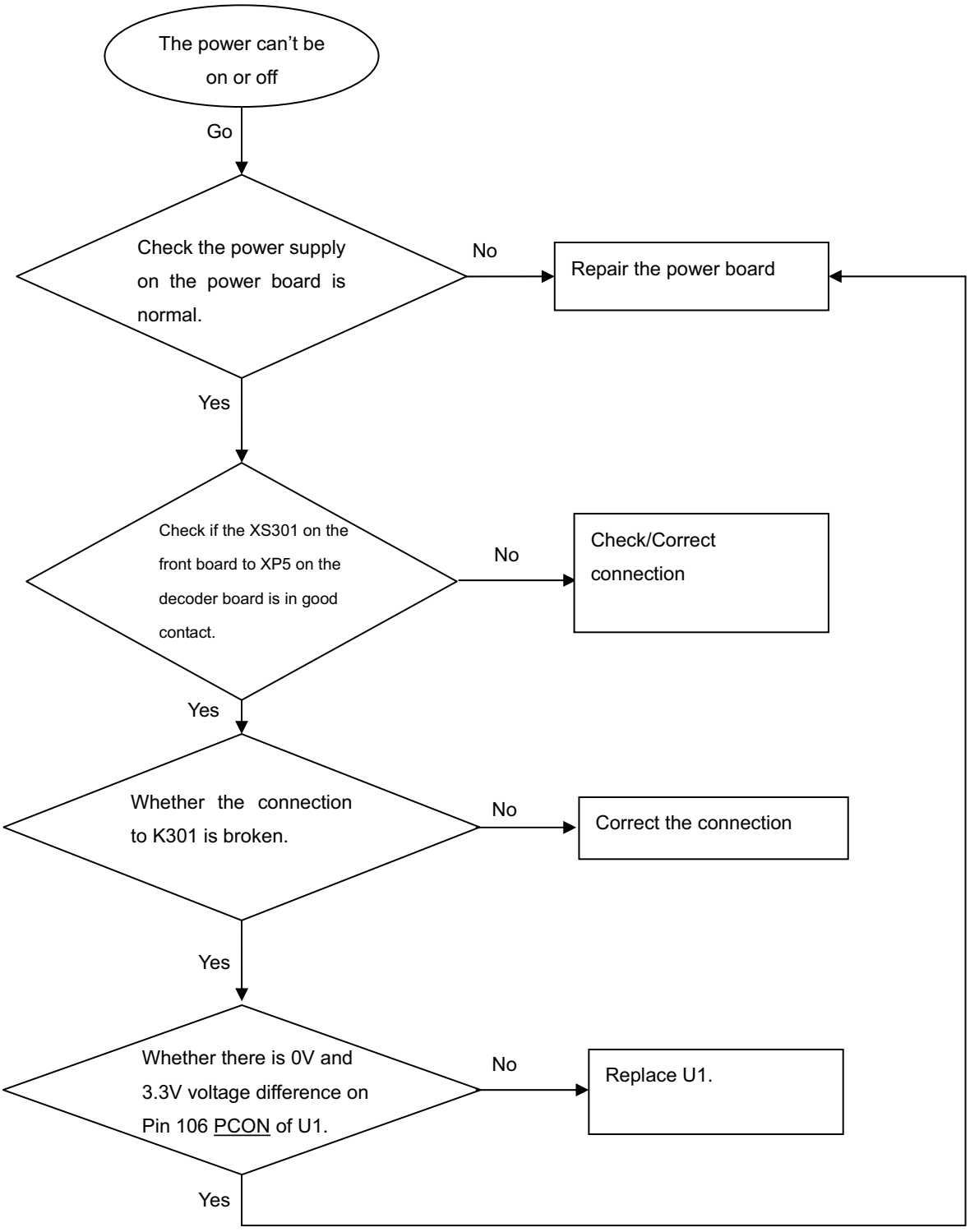
1) Power on the set and open the tray door;
2) Press the "Setup" button on the remote control,then the setup interface should be displayed on the TV screen;
3) Move the down cursor on remote control to choose "Reference" and press "1" "3" "8" "9" "3" "1" on the remote control;
4) Then move the up or down cursors to choose the region code.

Note: restart after above steps.

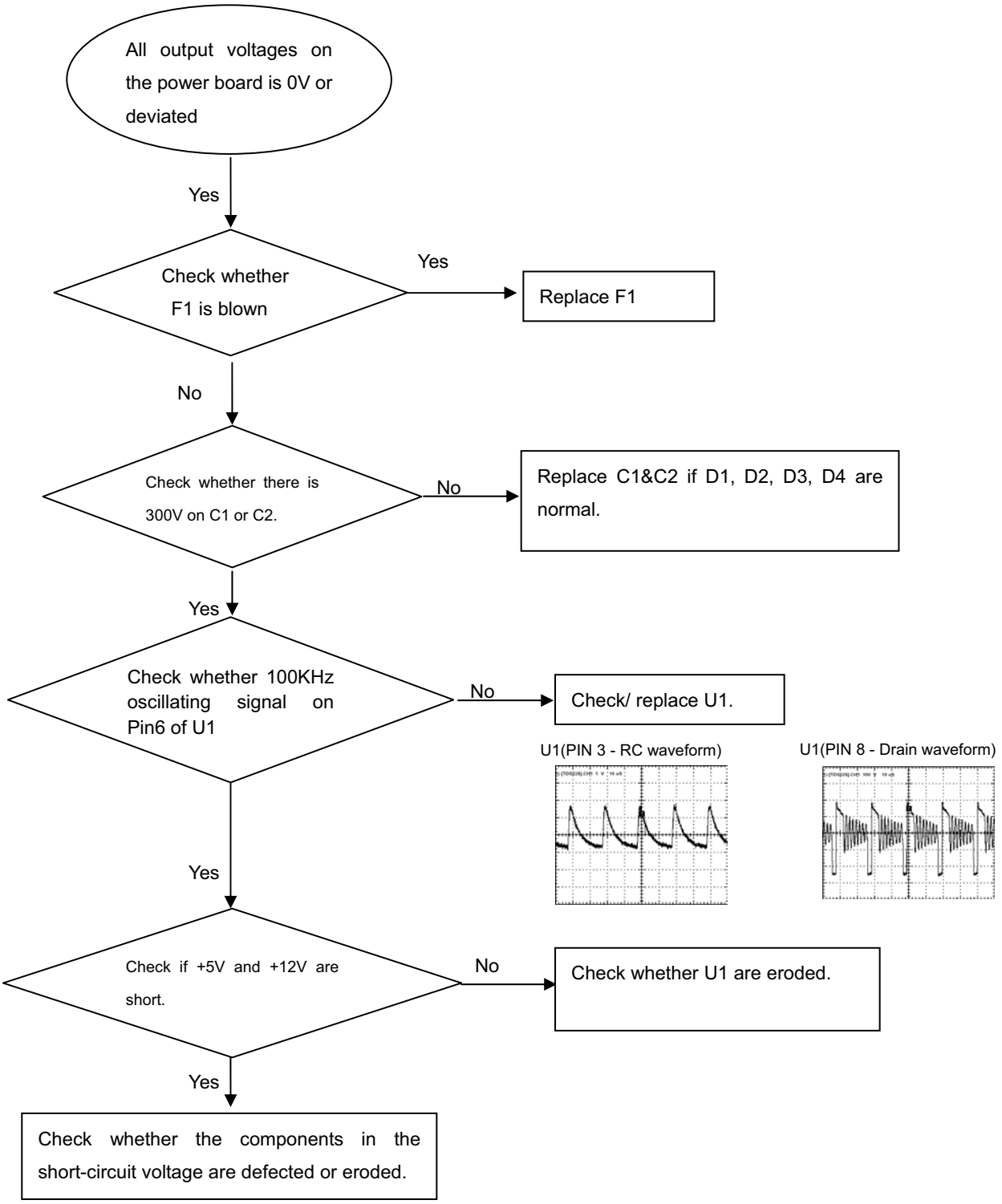
Spindle motor does not move


Motor no move
Go
Check the FFC connection between 24P and the loader.
No
Correct connection
Yes
Check whether "M5V" (+5V) voltage is normal.
No
Check the M5V power supply
Yes
Check whether laser voltage (1.9V for CD & 2.4V for DVD) on L9 and L10
No
Check/Replace Q5,Q6,Q7,Q8.
Yes
1.Whether voltage on pin 23 of U1 varies between 0 and 3.3V (3.3V for CD and 0V for DVD),
2.Whether peripheral components are eroded or badly soldered.
No
Check/ Replace U1.
Yes
Check opu focus
No
1. Check U1 25pin FOCUS_PWM signals
2.If there are F+, F-, T+ and T- signals output from U2.
Yes
Check/Replace the loader
FOCUS_PWN waveform

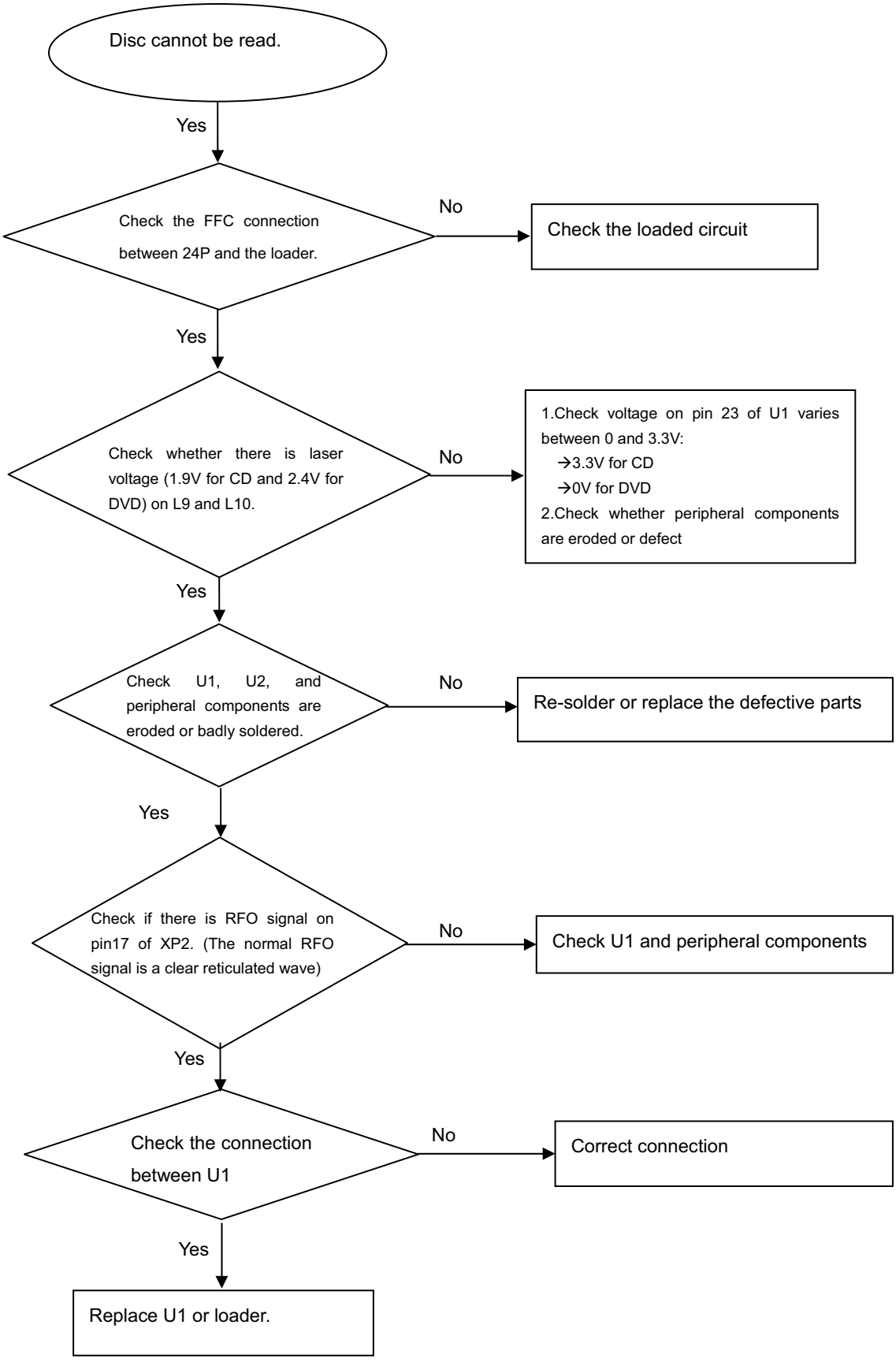
The power can not be on or off


The power can't be on or off
Go
Check the power supply on the power board is normal.
No
Repair the power board
Yes
Check if the XS301 on the front board to XP5 on the decoder board is in good contact.
No
Check/Correct connection
Yes
Whether the connection to K301 is broken.
No
Correct the connection
Yes
Whether there is 0V and 3.3V voltage difference on Pin 106 PCON of U1.
No
Replace U1.
Yes

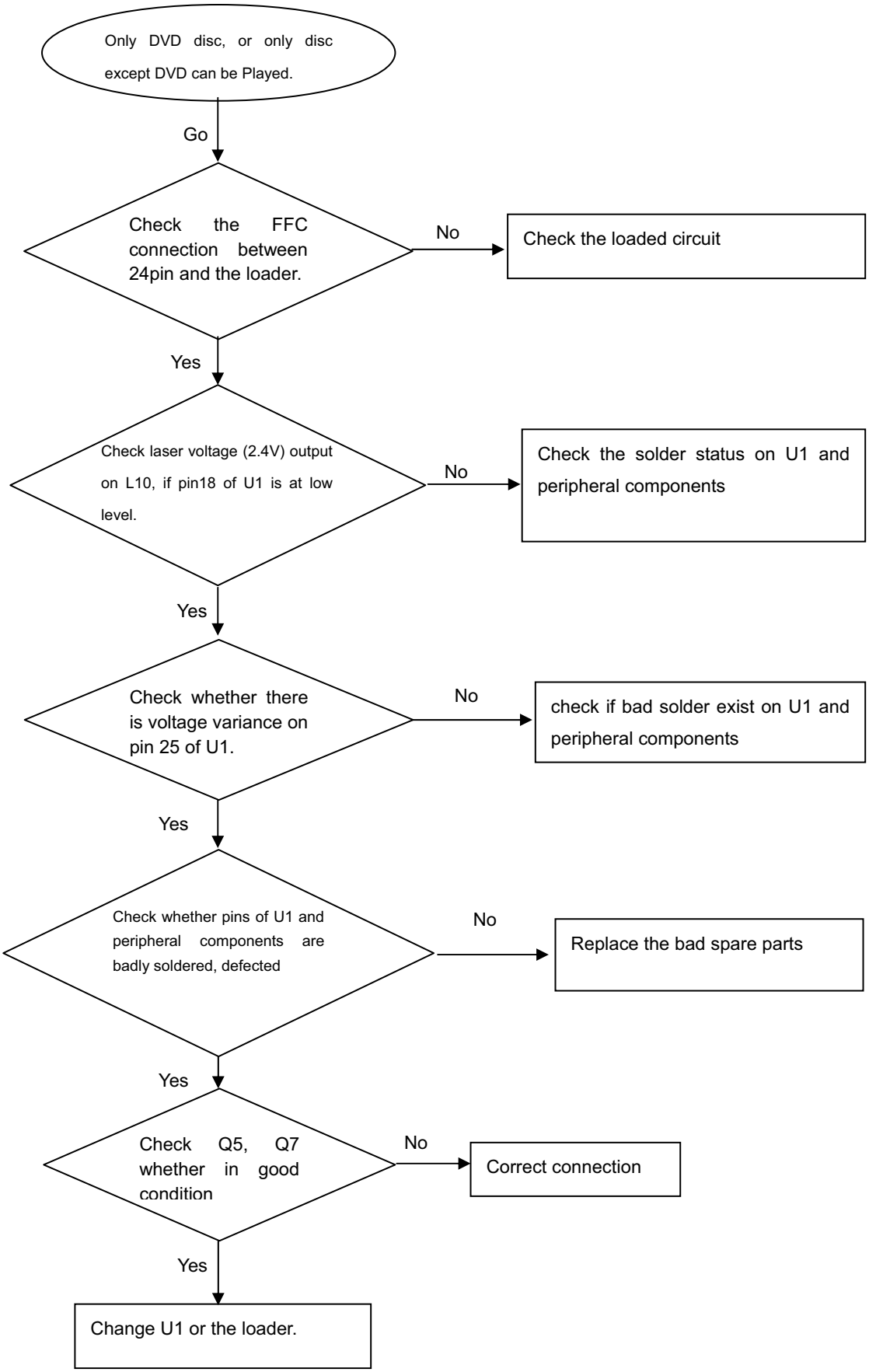
All output voltages on the power board is 0V or deviated.


All output voltages on the power board is 0V or deviated
Yes
Check whether F1 is blown
Yes
Replace F1
No
Check whether there is 300V on C1 or C2.
No
Replace C1&C2 if D1, D2, D3, D4 are normal.
Yes
Check whether 100KHz oscillating signal on Pin6 of U1
No
Check/ replace U1.
U1(PIN 3 - RC waveform)
U1(PIN 8 - Drain waveform)
Yes
Check if +5V and +12V are short.
No
Check whether U1 are eroded.
Yes
Check whether the components in the short-circuit voltage are defected or eroded.

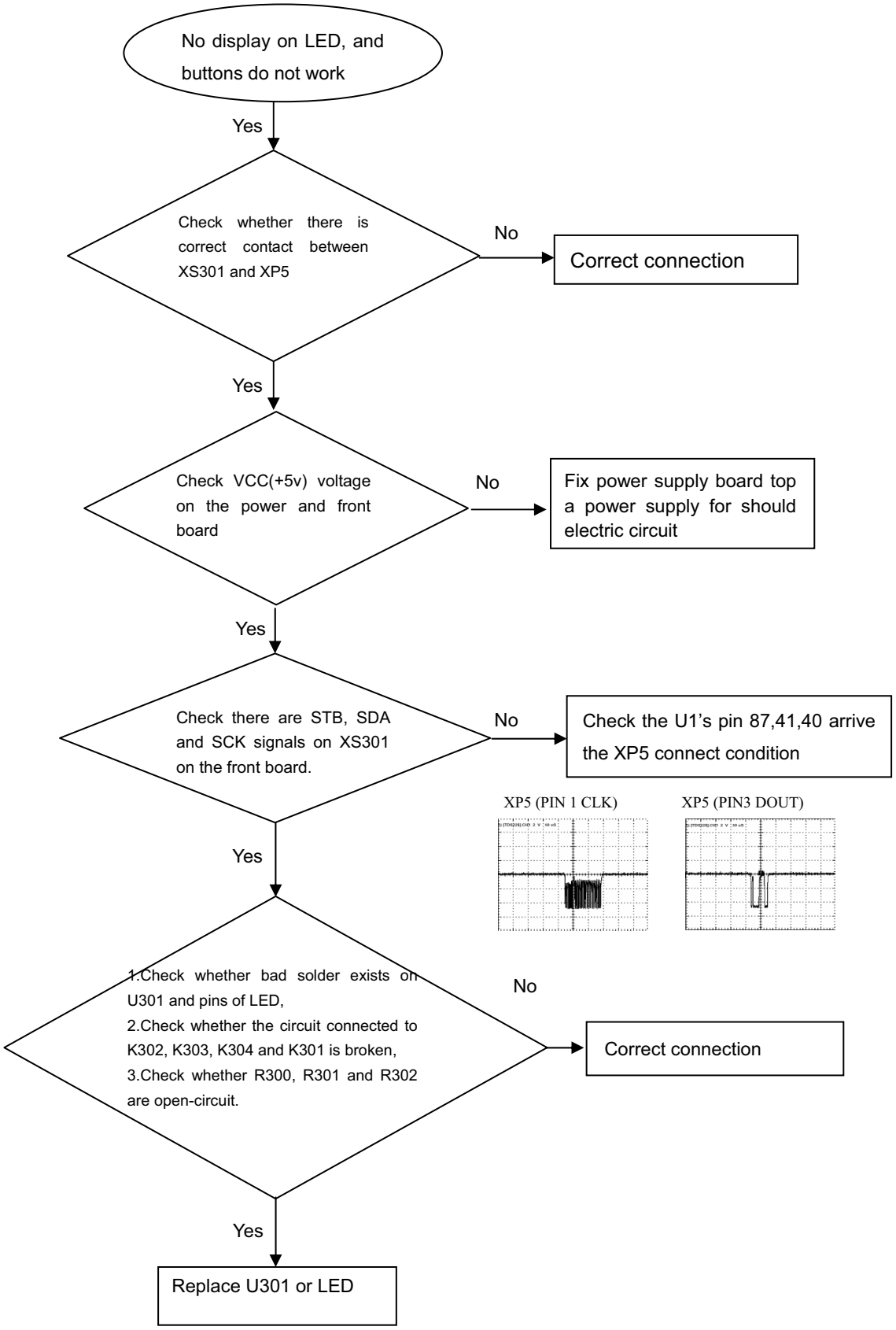
Disc cannot be read.


Disc cannot be read.
Yes
Check the FFC connection between 24P and the loader.
No
Check the loaded circuit
Yes
Check whether there is laser voltage (1.9V for CD and 2.4V for DVD) on L9 and L10.
No
1.Check voltage on pin 23 of U1 varies between 0 and 3.3V:
→3.3V for CD
→0V for DVD
2.Check whether peripheral components are eroded or defect
Yes
Check U1, U2, and peripheral components are eroded or badly soldered.
No
Re-solder or replace the defective parts
Yes
Check if there is RFO signal on pin17 of XP2. (The normal RFO signal is a clear reticulated wave)
No
Check U1 and peripheral components
Yes
Check the connection between U1
No
Correct connection
Yes
Replace U1 or loader.

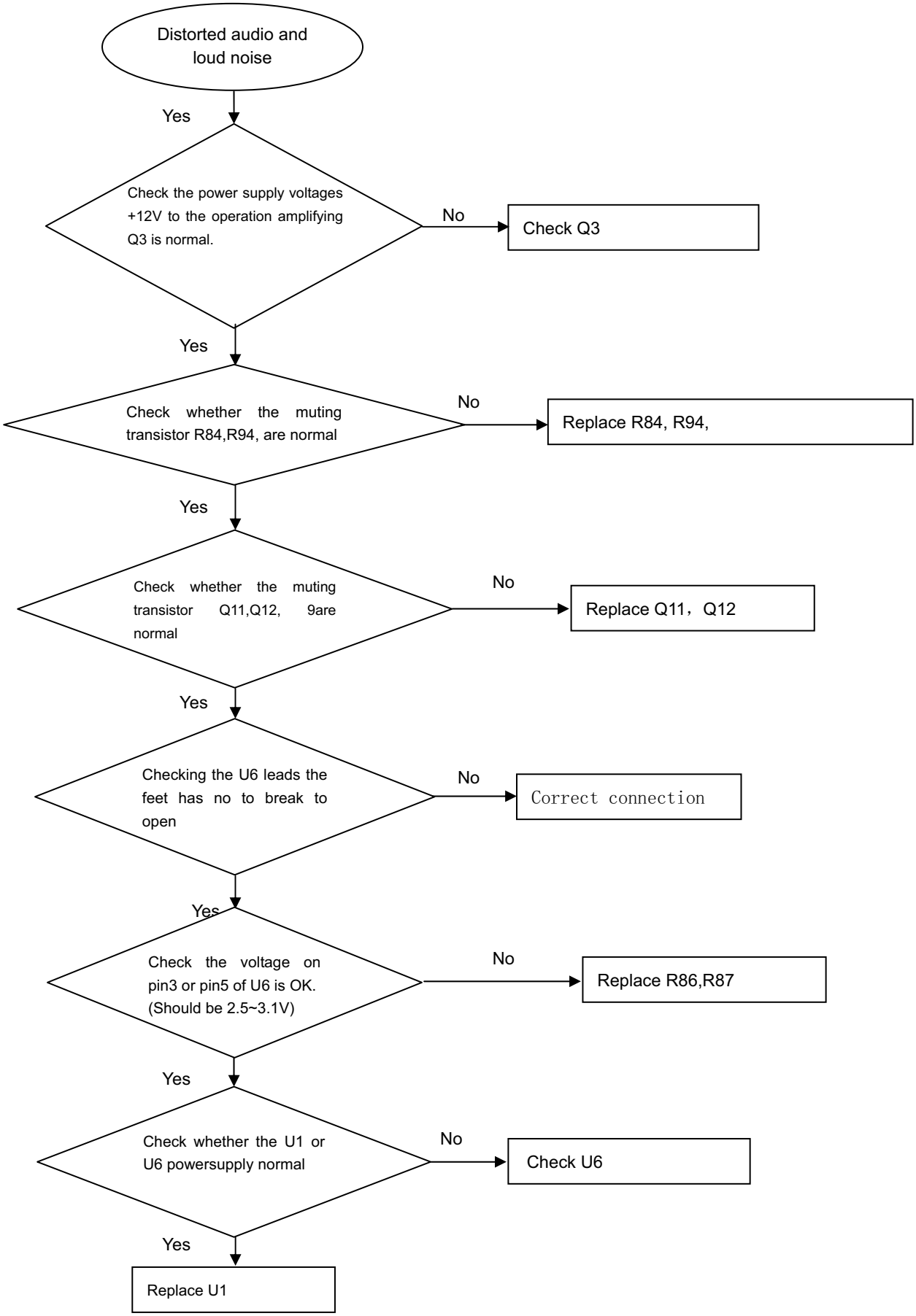
Only DVD disc or only disc except DVD can be played


Only DVD disc, or only disc except DVD can be Played.
Go
Check the FFC connection between 24pin and the loader.
No
Check the loaded circuit
Yes
Check laser voltage (2.4V) output on L10, if pin18 of U1 is at low level.
No
Check the solder status on U1 and peripheral components
Yes
Check whether there is voltage variance on pin 25 of U1.
No
check if bad solder exist on U1 and peripheral components
Yes
Check whether pins of U1 and peripheral components are badly soldered, defected
No
Replace the bad spare parts
Yes
Check Q5, Q7 whether in good condition
No
Correct connection
Yes
Change U1 or the loader.

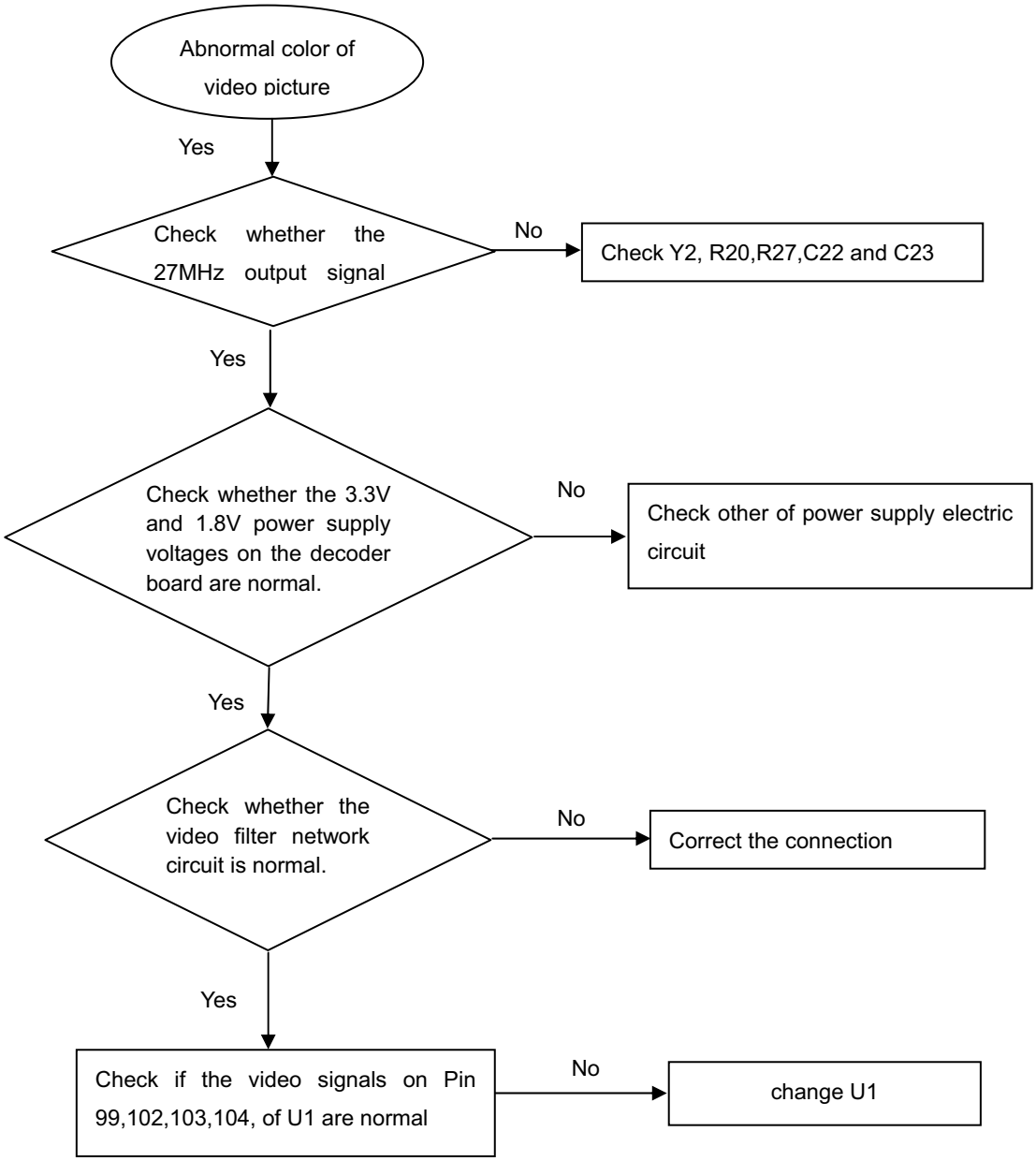
No display on LED, and buttons do not work


No display on LED, and buttons do not work
Yes
Check whether there is correct contact between XS301 and XP5
No
Correct connection
Yes
Check VCC(+5v) voltage on the power and front board
No
Fix power supply board top a power supply for should electric circuit
Yes
Check there are STB, SDA and SCK signals on XS301 on the front board.
No
Check the U1's pin 87,41,40 arrive the XP5 connect condition
XP5 (PIN 1 CLK)
XP5 (PIN3 DOUT)
Yes
1.Check whether bad solder exists on U301 and pins of LED,
2.Check whether the circuit connected to K302, K303, K304 and K301 is broken,
3.Check whether R300, R301 and R302 are open-circuit.
No
Correct connection
Yes
Replace U301 or LED

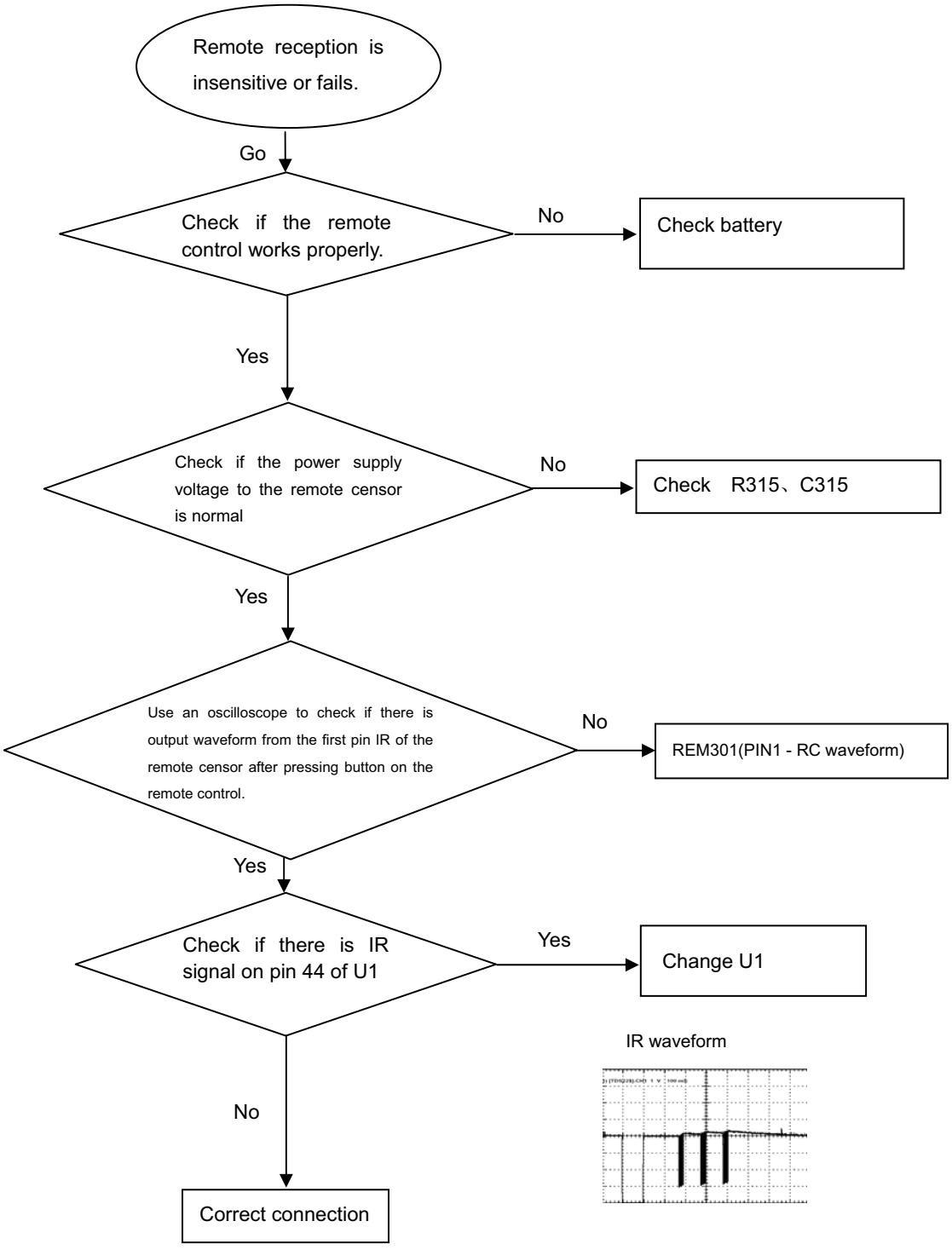
Distorted audio and loud noise



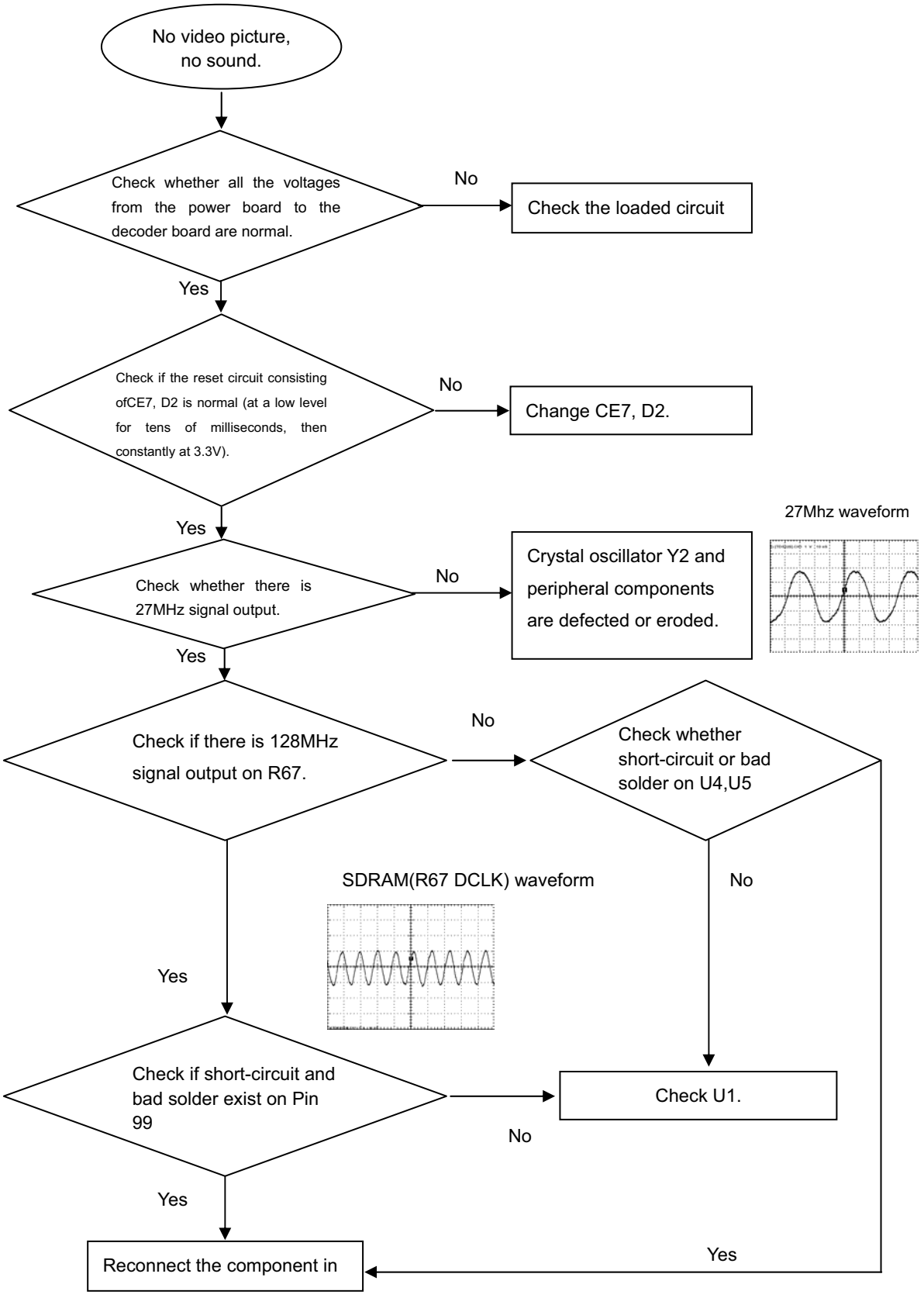
Abnormal color of video picture


Abnormal color of video picture
Yes
Check whether the 27MHz output signal
No
Check Y2, R20,R27,C22 and C23
Yes
Check whether the 3.3V and 1.8V power supply voltages on the decoder board are normal.
No
Check other of power supply electric circuit
Yes
Check whether the video filter network circuit is normal.
No
Correct the connection
Yes
Check if the video signals on Pin 99,102,103,104, of U1 are normal
No
change U1

Remote reception is insensitive or fails.

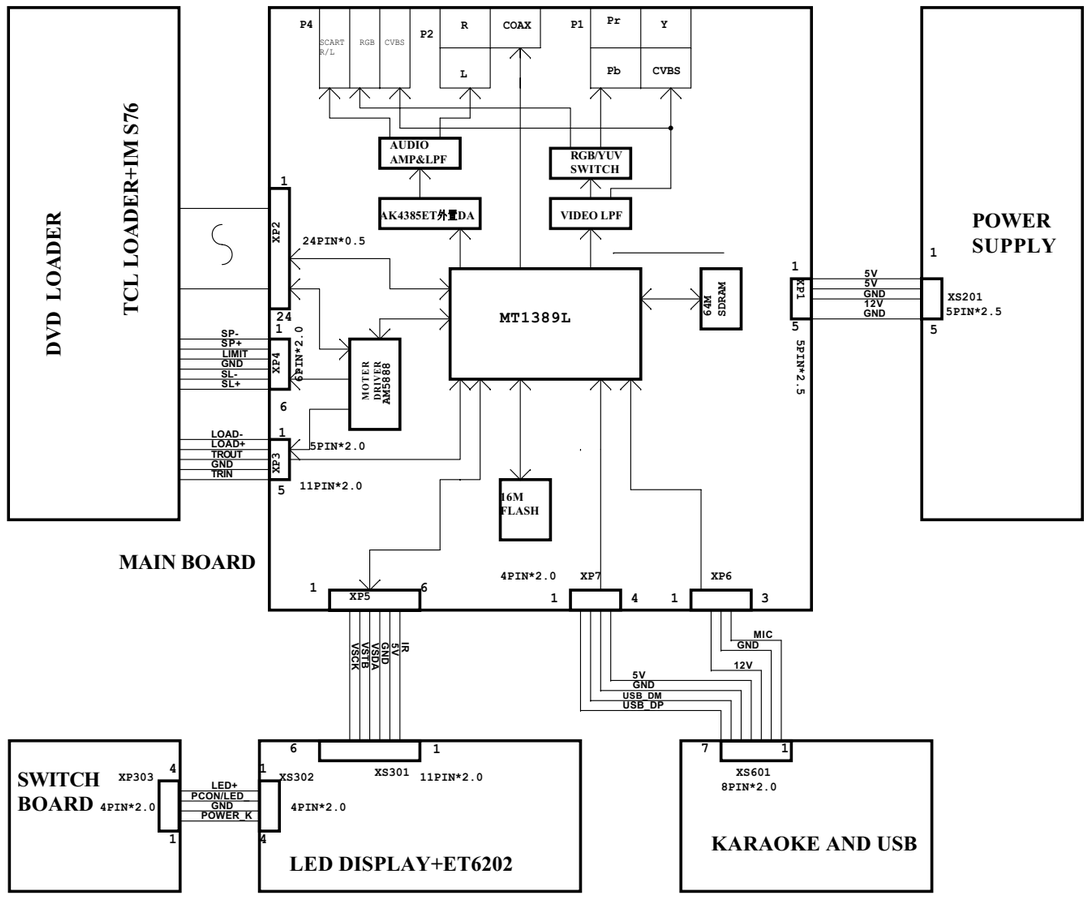

Remote reception is insensitive or fails.
Go
Check if the remote control works properly.
No
Check battery
Yes
Check if the power supply voltage to the remote censor is normal
No
Check R315、C315
Yes
Use an oscilloscope to check if there is output waveform from the first pin IR of the remote censor after pressing button on the remote control.
No
REM301(PIN1 - RC waveform)
Yes
Check if there is IR signal on pin 44 of U1
Yes
Change U1
IR waveform
No
Correct connection

No video picture, no sound.


No video picture, no sound.
Check whether all the voltages from the power board to the decoder board are normal.
No
Check the loaded circuit
Yes
Check if the reset circuit consisting ofCE7, D2 is normal (at a low level for tens of milliseconds, then constantly at 3.3V).
No
Change CE7, D2.
Yes
27Mhz waveform
Check whether there is 27MHz signal output.
No
Crystal oscillator Y2 and peripheral components are defected or eroded.
Yes
Check if there is 128MHz signal output on R67.
No
Check whether short-circuit or bad solder on U4,U5
SDRAM(R67 DCLK) waveform
No
Yes
Check if short-circuit and bad solder exist on Pin 99
Check U1.
No
Yes
Reconnect the component in
Yes

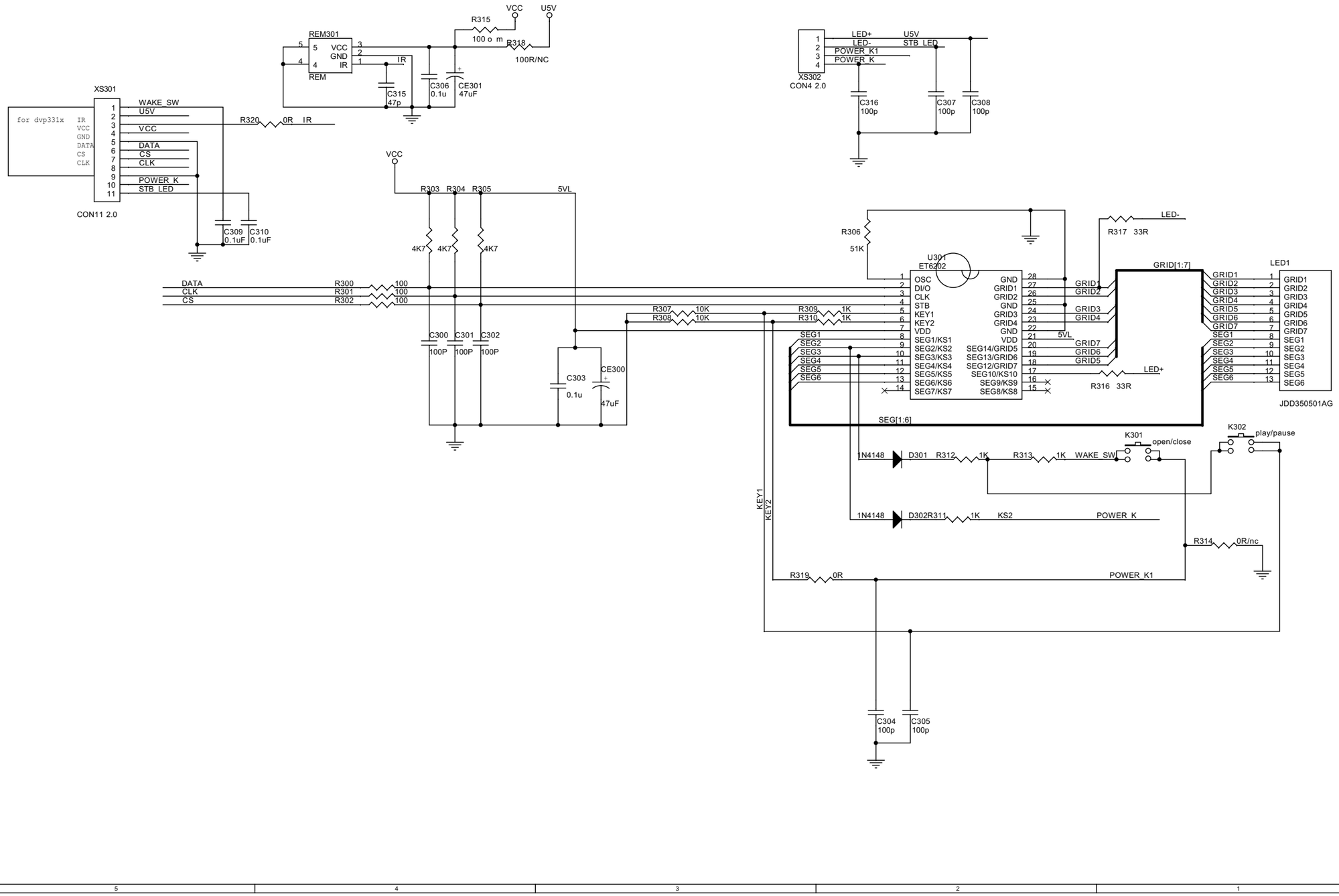
6-1

DVP3350K WIRING DIAGRAM



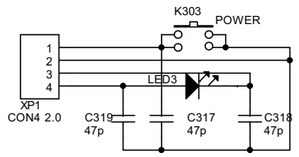
7-1

Front Board Electric Diagram:



7-2

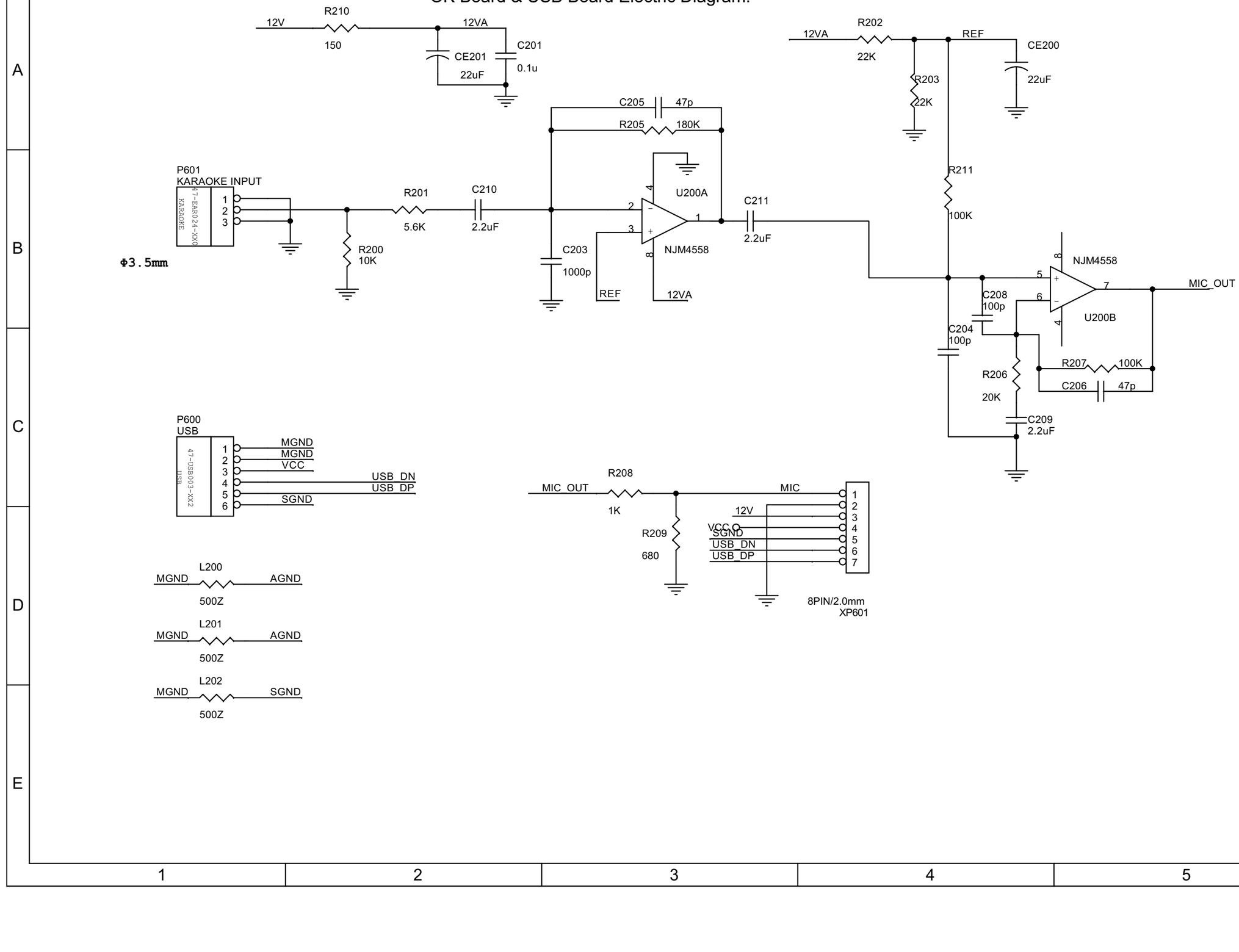
Swith Board Electric Diagram:



SWITCH BOARD

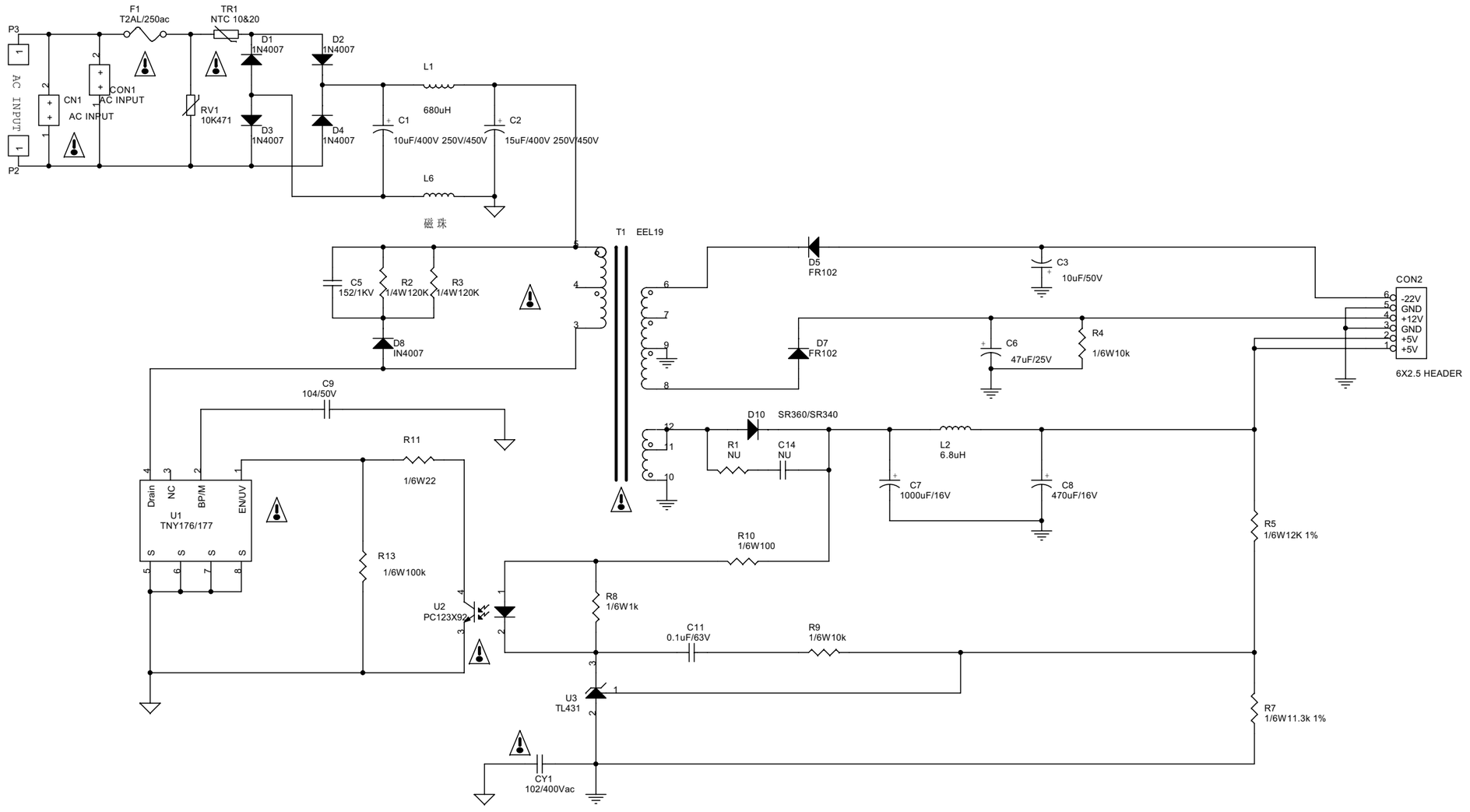
7-3

OK Board & USB Board Electric Diagram:



7-4

Power Board Electric Diagram for DVP3350K/93 & DVP3350K/77:



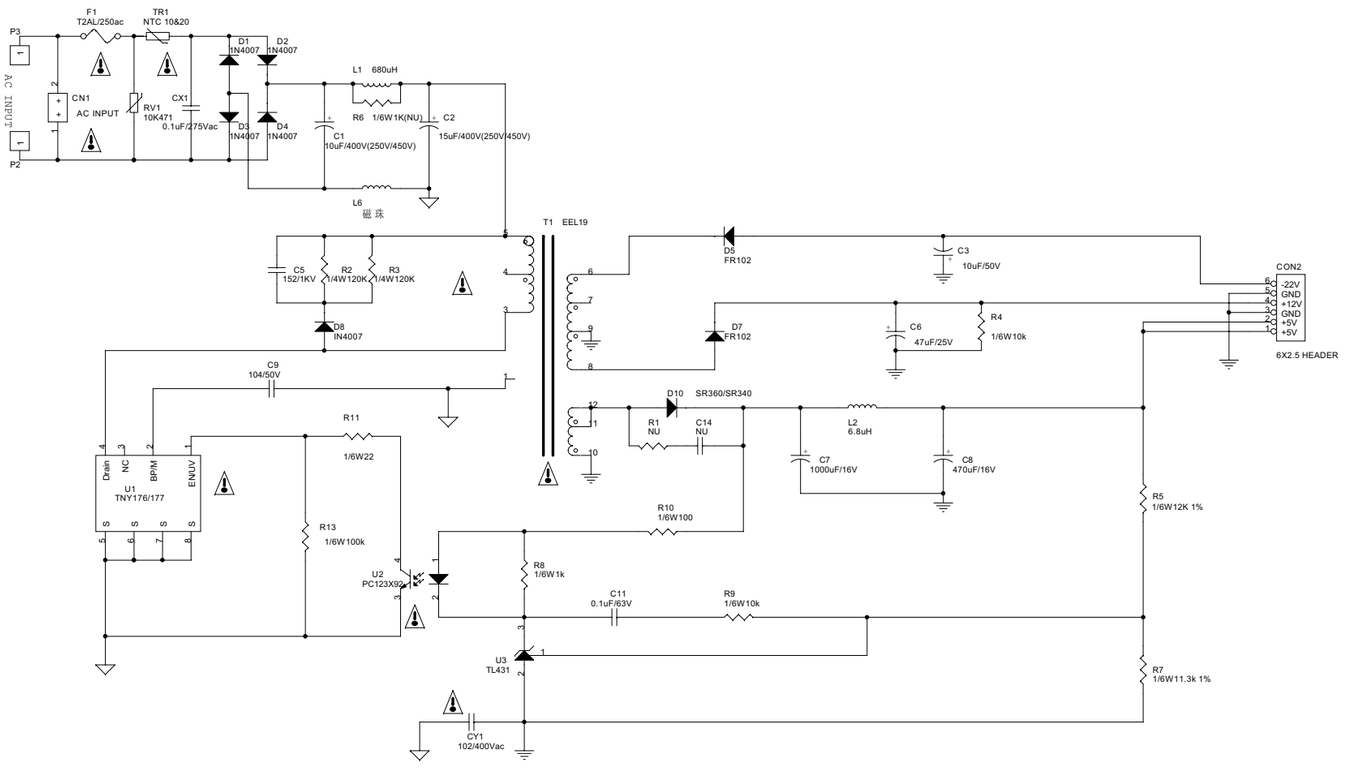
*** CAUTION :**

THE PARTS MARKED WITH ⚠ ARE IMPORTANT PARTS ON THE SAFETY.

PLEASE USE THE PARTS HAVING THE DESIGNATED PARTS NUMBER WITHOUT FAIL.

7-4

Power Board Electric Diagram for DVP3350K/96:



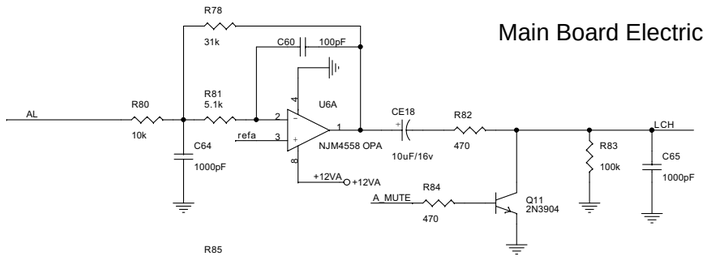
*** CAUTION :**

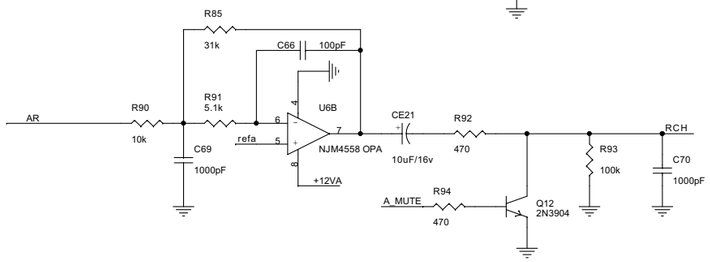
THE PARTS MARKED WITH ⚠ ARE IMPORTANT PARTS ON THE SAFETY.

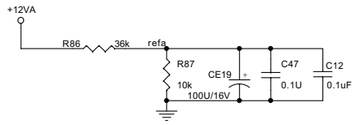
PLEASE USE THE PARTS HAVING THE DESIGNATED PARTS NUMBER WITHOUT FAIL.

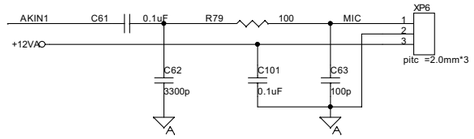
7-5

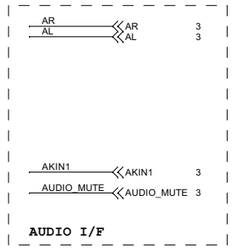
Main Board Electric Diagram: Power

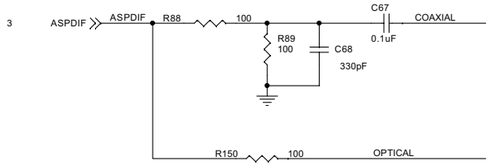


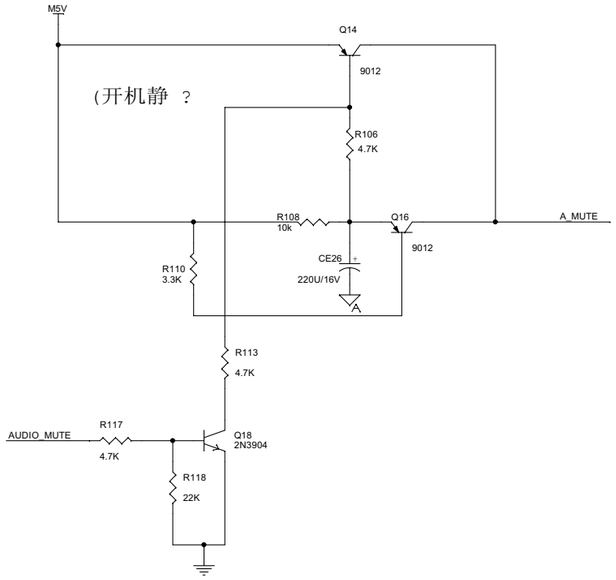


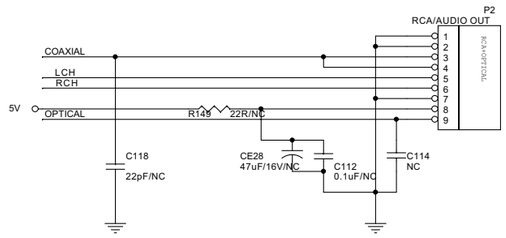






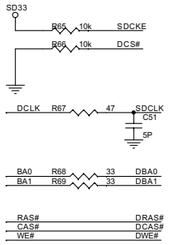


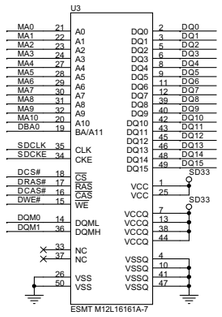


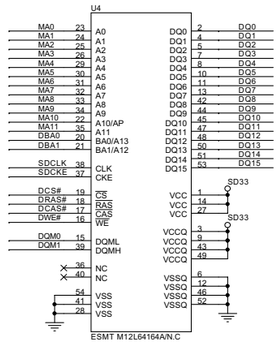


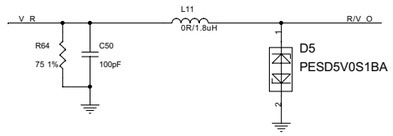
7-6

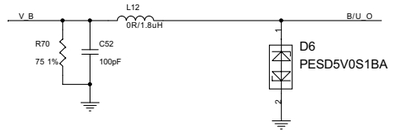
Main Board Electric Diagram: MT1389L/K LQFP128 & MOTOR DRIVER

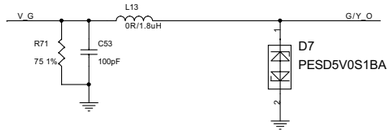


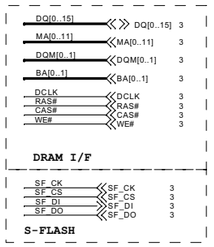


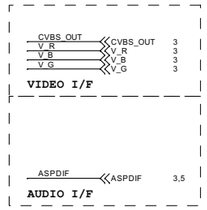




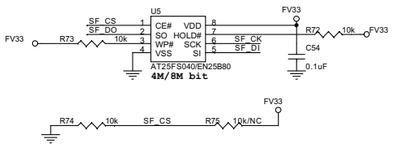


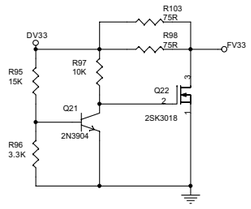


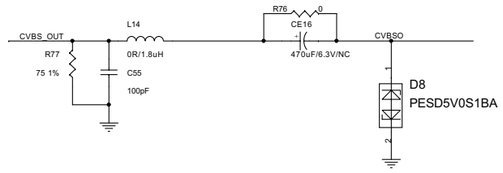


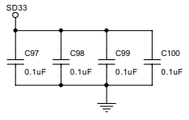


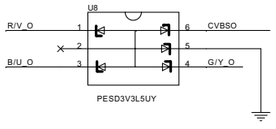
S-FLASH

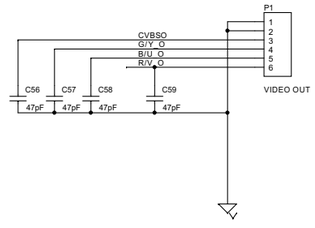












7-7

Main Board Electric Diagram: SDRAM & FLASH & Video output

SERVO RF DeCAP.

RF Reference

RESET Circuit

C21 must close to PIN43 of 1389L/K.

Chip Decap.

MT1389L/K
LQFP 128
Desktop
V1.0

MT1389L/KQMD
MTK1389L/K-128

SONY 313

Very Important to reduce Noise

RS-232
Default

TO FRONT PANEL

AM5888

PRTR5V0U2X

7-8

Main Board Electric Diagram: Audio I/F

COMMON1389L/K_KHM313_AM5888_V2 Desktop Model

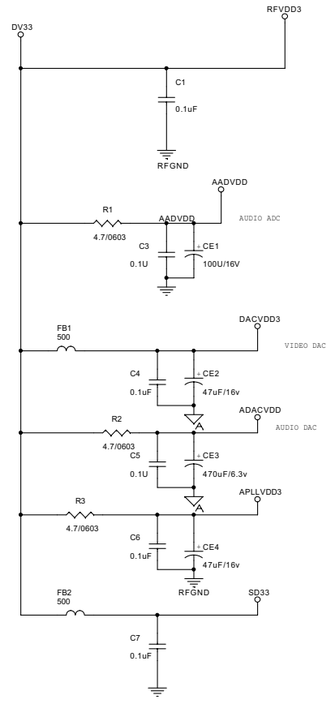
MT1389L/K (LQFP128) DVD TEST Board w/ Sony KHM Series PUHs

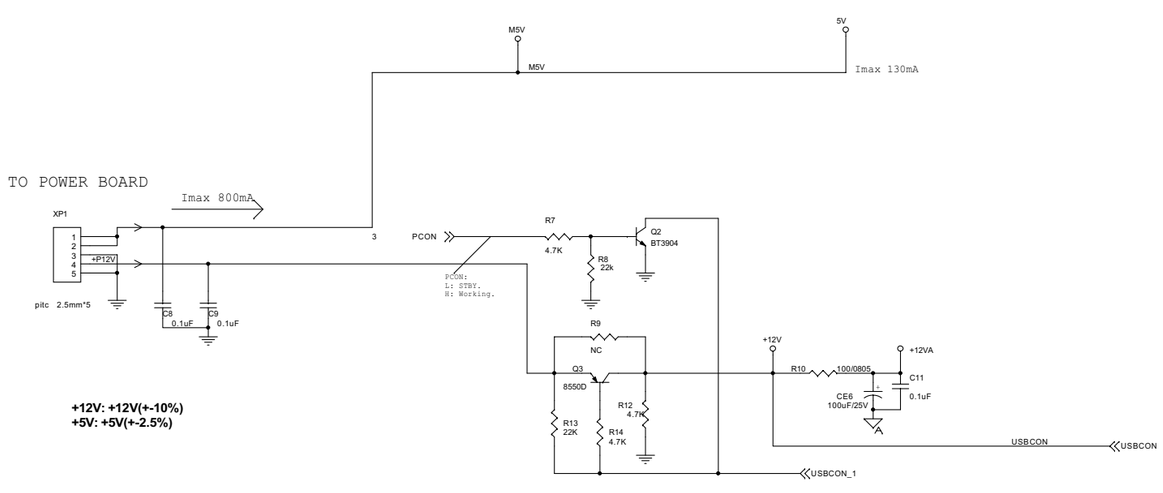
MT1389L/K Features Support List (MIC/USB Only for MT1389L)

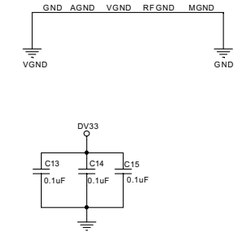
Item	Features
1	5.1CH(only 2CH for 89K) + USB + VFD + AMUTE
2	
3	
4	

MT1389L/K General GPIO List

Name	PIN	Features
GPIO3	33	TROUT
GPIO4	34	LIMIT
GPIO6	35	TROPEN
GPIO7	87	VSTB
GPO_A	22	STBY
GPO_B	23	IOA
GPIO2	26	NC
GPIO8	88	TRCLOSE
GPIO9	89	RXD
GPIO10	91	TXD
GPIO11	92	AUDIO_MUTE
GPIO12	93	ASPDIF
GPIO13	94	TRIN
GPIO19	106	PCON
GPIO20	107	ADVCM
GPIO21	108	AKIN1
GPIOK0	27	Only for 89K
GPIOK1	28	Only for 89K
GPIOK2	31	Only for 89K

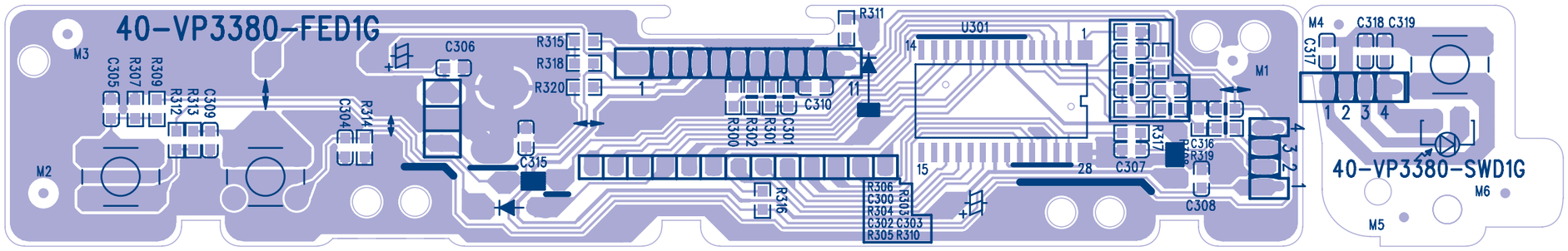




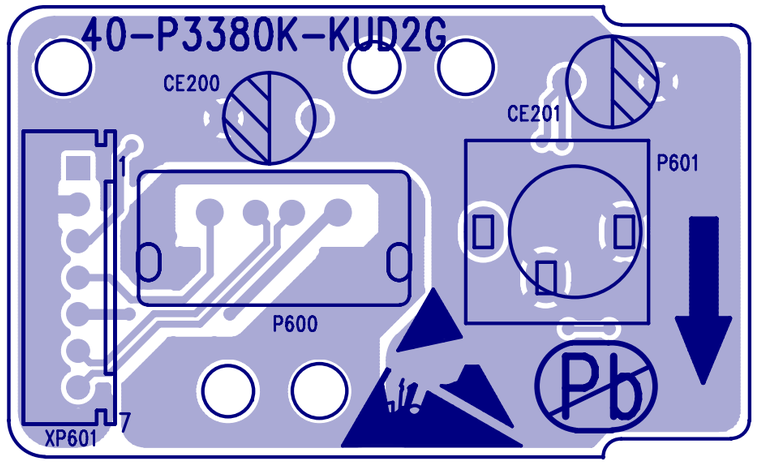


7-9

Front Board Print-layout (Bottom side):

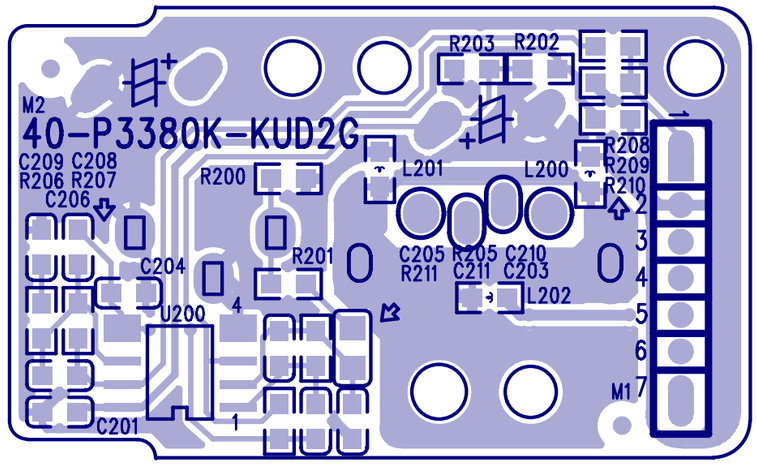


OK Board Print-layout (Top side):



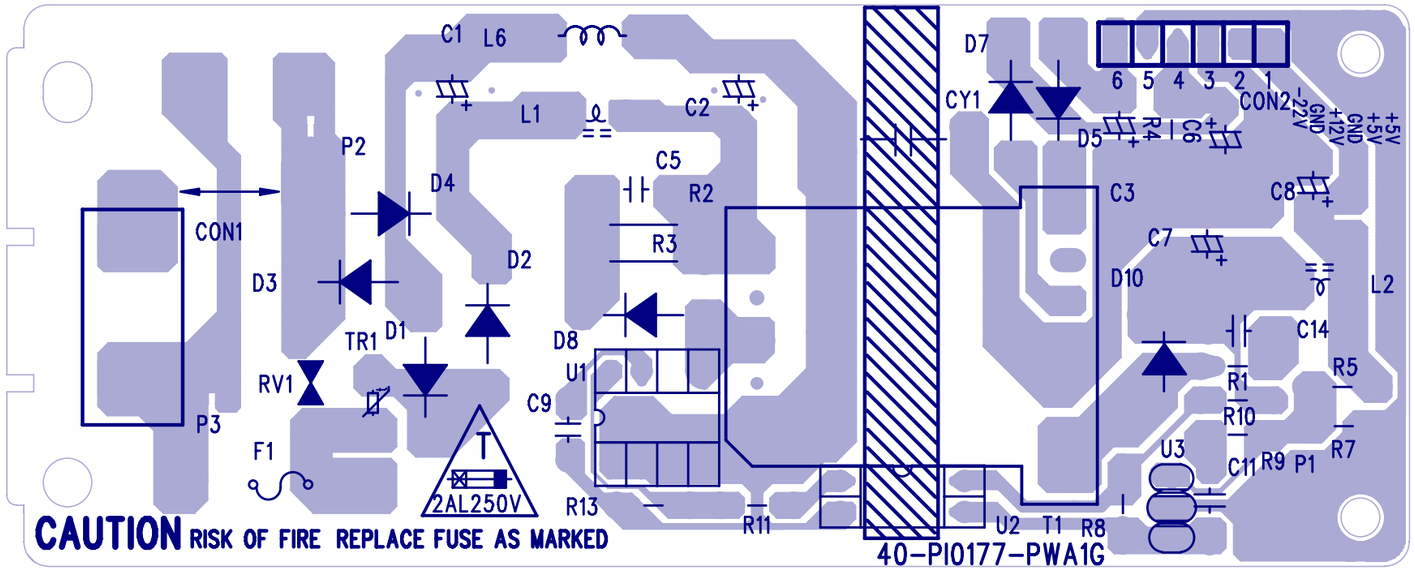
7-10

OK Board Print-layout (Bottom side):



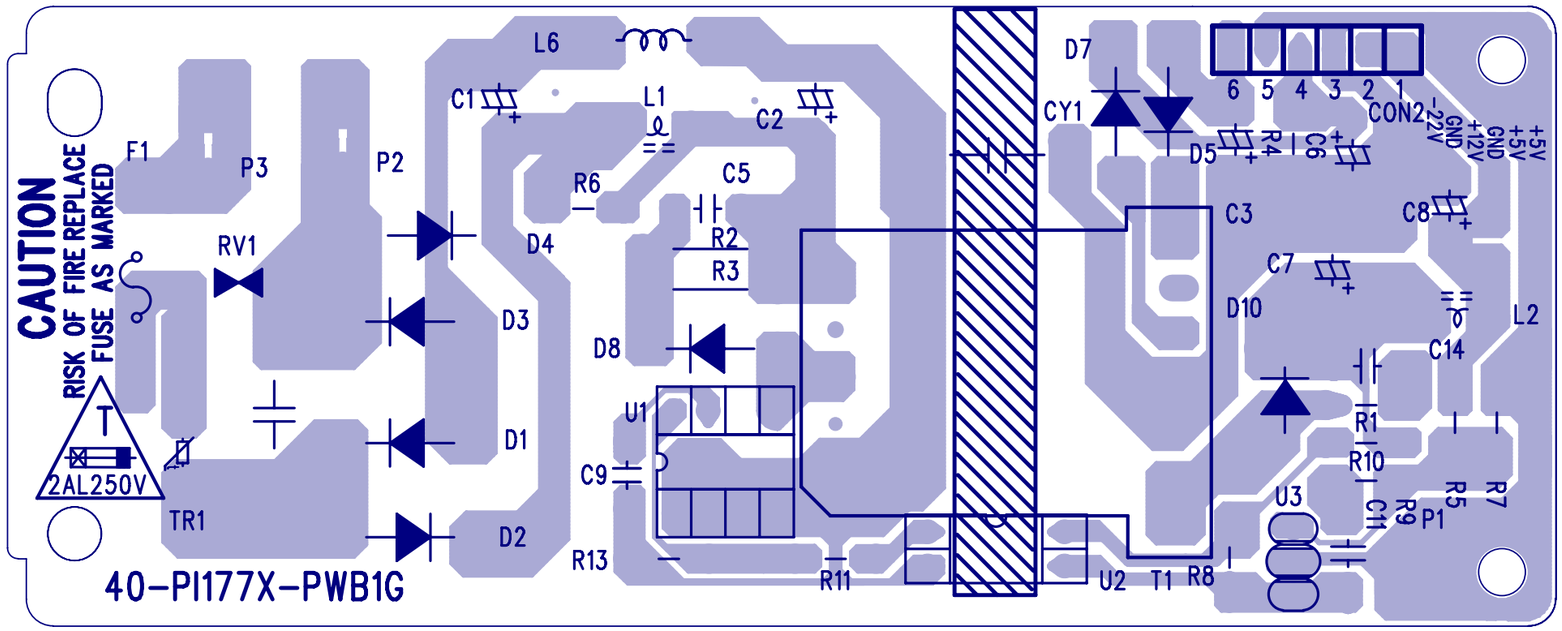
7-11

Power Board Print-layout for DVP3350K/93 & DVP3350K/77 (Bottom side):



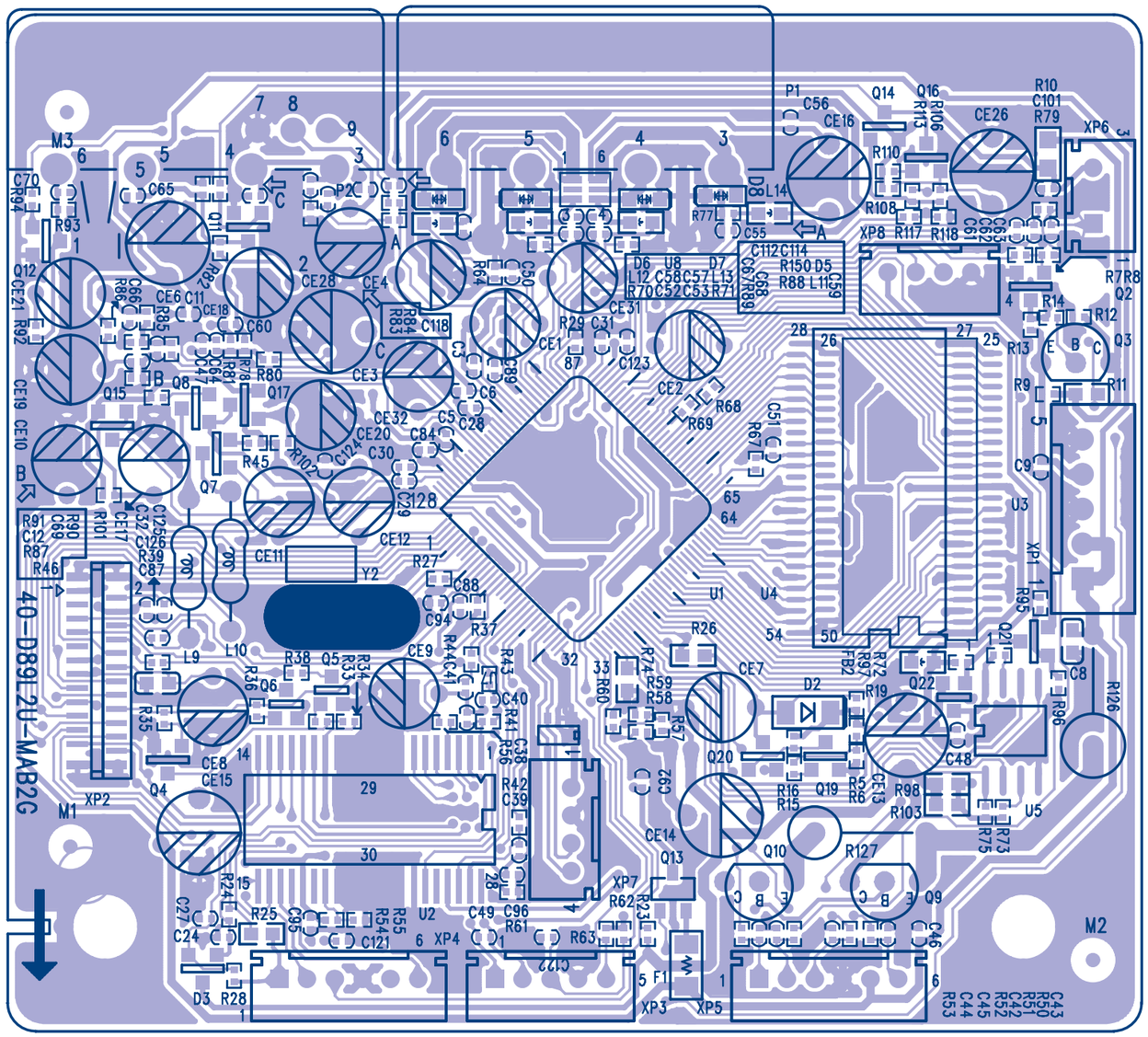
7-11

Power Board Print-layout for DVP3350K/96 (Bottom side):



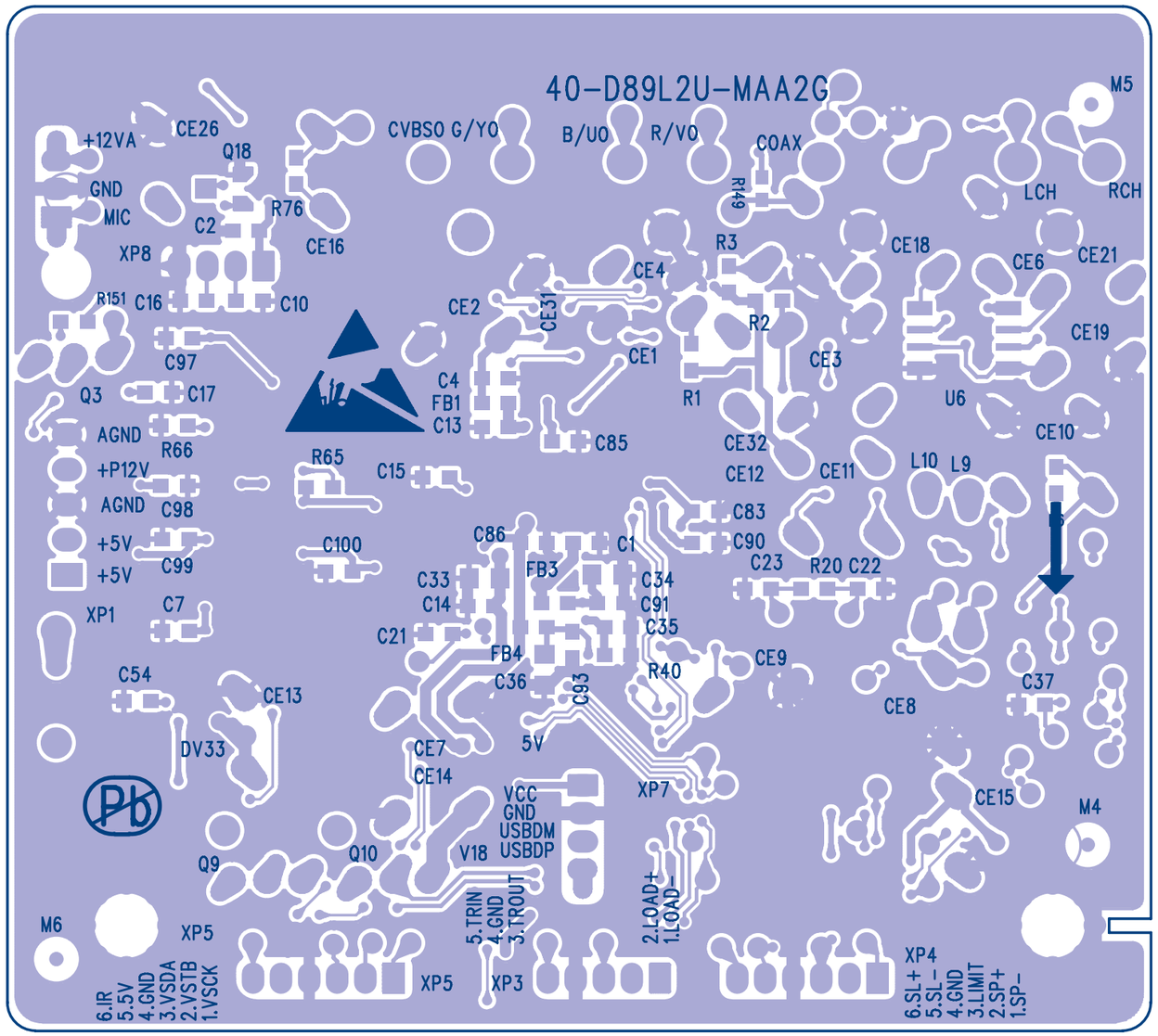
7-12

Main Board Print-layout (Top side):

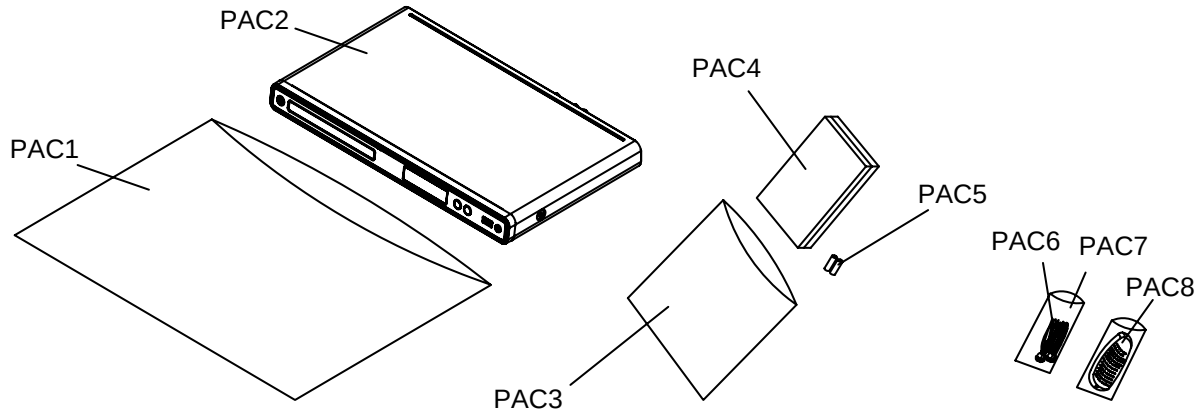


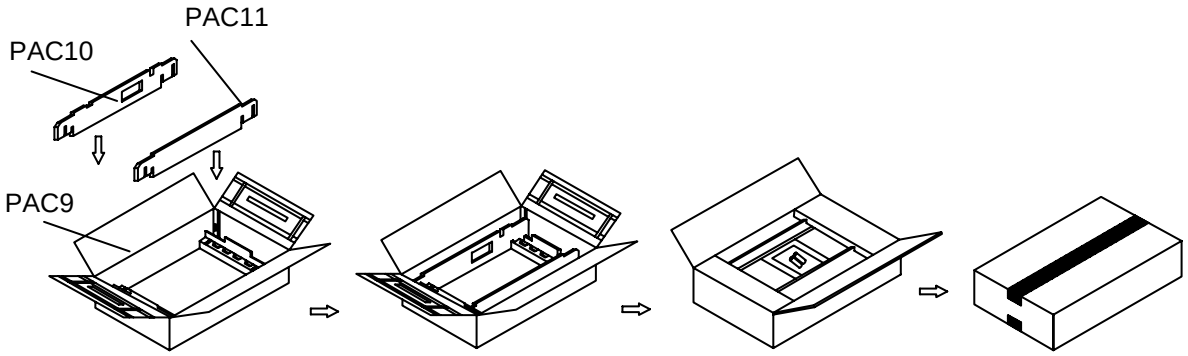
7-13

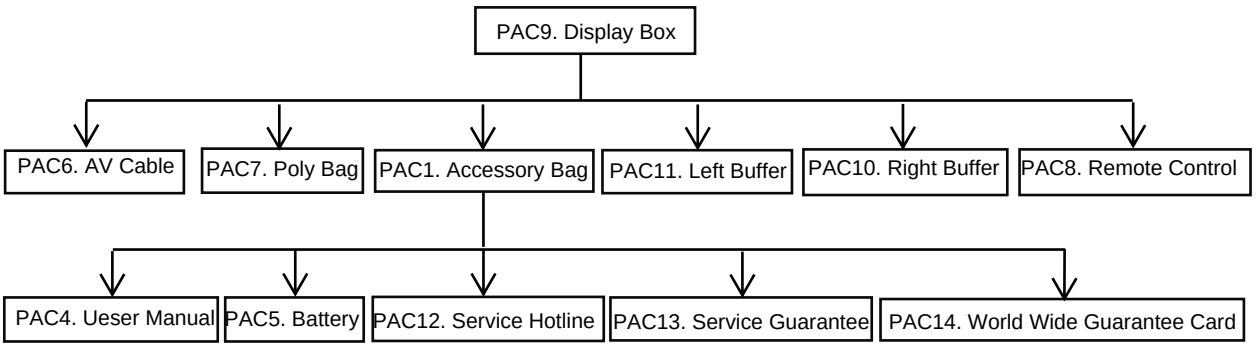
Main Board Print-layout (Bottom side):



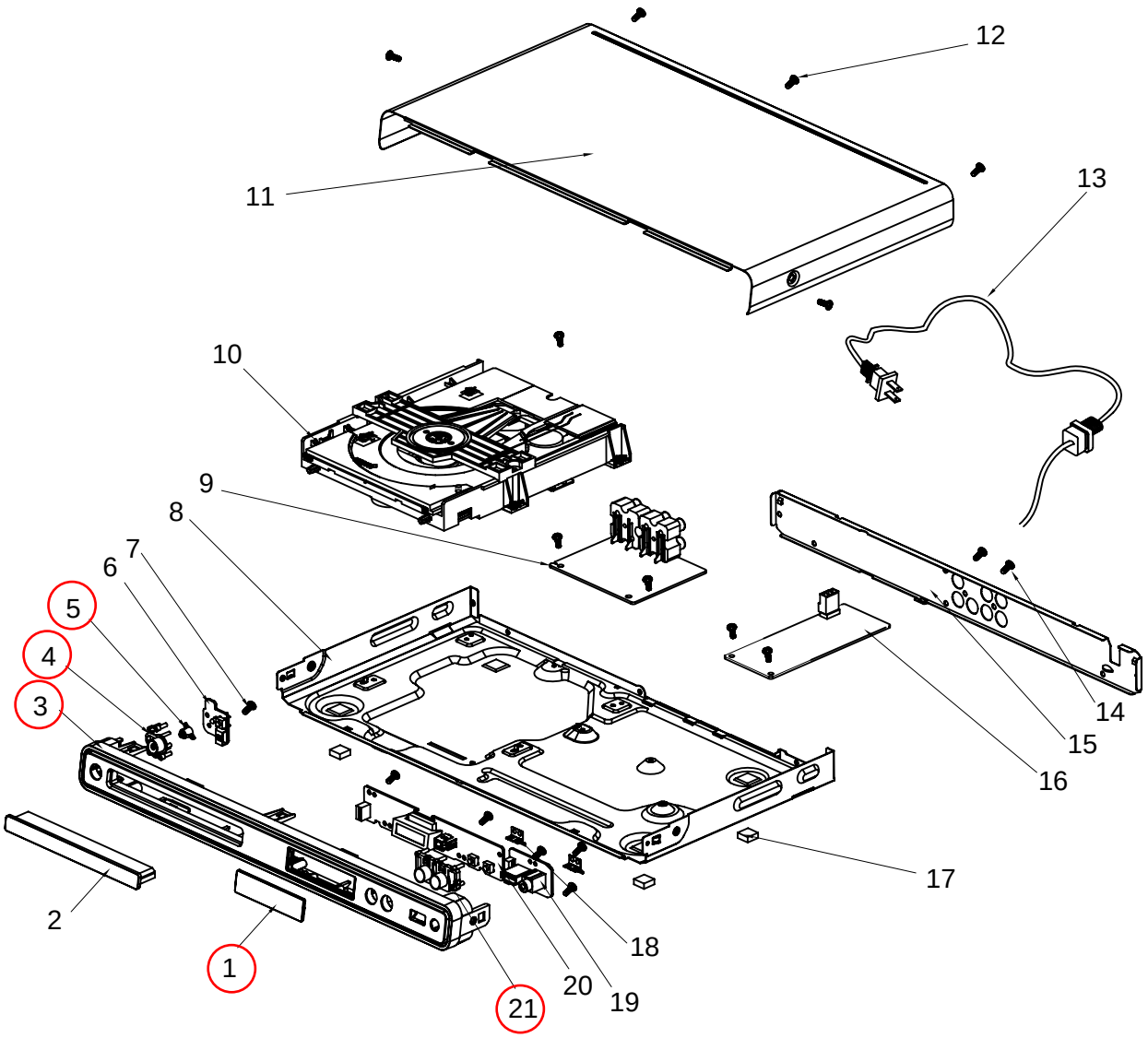
DVP3350K/93 Packing View:







Exploded View for DVP3350K/93 & DVP3350K/77 & DVP3350K/96:



It's a general mechanical exploded view for DVP3350K/93 & DVP3350K/77 & DVP3350K/96, Pls refer to the model set for detailed information.
Assy 1 components include:1.3.4.5.21

DVP3350K/93 SERVICE PARTLIST

ELECTRICAL PARTLIST

No	12NC No.	Description	Q'ty
9	**996510021969**	**ASSY-MAIN BD**	**1**
⚠ **16**	**996510021012**	**ASSY-PW BD**	**1**
19	**996510020918**	**ASSY-US BD (OK+USB)**	**1**
20	**996510020922**	**ASSY-FB BD**	**1**
6	**996510020934**	**ASSY-SW BD**	**1**
10	**996510020923**	**LOADER**	**1**
OPU	996510020914	IM S76RFXP OPU	1

ASSY-MAIN BD COMPONENT PARTLIST

No	12NC No.	Description	Q'ty
D2	996510009667	SMD. SWITCHING DIODE LL4148	1
D3	996510009668	BAT54C	1
L10	996500014082	COIL CHOKE 10UH +/-10%	1
L9	996500014082	COIL CHOKE 10UH +/-10%	1
Q10	996510009671	PNP TRANSISTOR	1
Q11	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q12	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q13	996510010949	MOSFET AO3402	1
Q14	996510009670	TRANSISTOR SMT 3CG9012M	1
Q15	996510009670	TRANSISTOR SMT 3CG9012M	1
Q16	996510009670	TRANSISTOR SMT 3CG9012M	1
Q17	996510009670	TRANSISTOR SMT 3CG9012M	1
Q18	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q19	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q2	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q20	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q3	996510009671	PNP TRANSISTOR	1
Q4	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q5	996510009769	N Channel MOSFET 2SK3108	1
Q6	996510009769	N Channel MOSFET 2SK3108	1
Q7	996510009670	TRANSISTOR SMT 3CG9012M	1
Q8	996510009670	TRANSISTOR SMT 3CG9012M	1
Q9	996510009671	PNP TRANSISTOR	1
U1	996510010950	IC MT1389DE/L	1
U2	996510011055	IC CD5888CB	1
U4	996510021455	64M SDRAM -6NS TSP54	1
U5	996510021476	16M SPI FLASH AMIC	1
U6	996500032494	IC AS4558M	1
U8	996510020941	IC PESD3V3L5UY	1
Y2	996510009675	27MCL20PF	1

ASSY-PW BD COMPONENT PARTLIST

No	12NC No.	Description	Q'ty
16	996510021012	ASSY-PW BD	1
D1	996510011047	DIODE IN4007	1
D10	996500027866	DIODE SR360 3A/60V	1
D2	996510011047	DIODE IN4007	1
D3	996510011047	DIODE IN4007	1
D4	996510011047	DIODE IN4007	1
D7	996500014043	DIODE FR102 (FAST RECOVERY)	1
D8	996510011047	DIODE IN4007	1
L1	996510009942	COIL WIDTH	1
L2	996500032509	COIL SL0811-6R8K2R4	1
⚠ T1	996510010954	TRANSFORMER CONV	1
U1	996510010953	IC TNY176PN	1
U2	996500027867	PHOTOCOUPLER PS2561L1-1-V(WF)	1
U3	996500014609	IC AM431LP	1

ASSY-FB BD COMPONENT PARTLIST

No	12NC No.	Description	Q'ty
LED1	996510020917	J2808AG	1
REM301	996510020925	HM338-12 RECEIVER MOD H=12MM	1
U301	996510009665	IC ET6202 SOP-2	1

ASSY-US BD COMPONENT PARTLIST

No	12NC No.	Description	Q'ty
U200	996500032494	IC AS4558M	1

MECHANICAL PARTLIST

No	12NC No.	Description	Q'ty
11	996510020929	TOP COVER	1
15	996510021981	BACK PANEL	1
17	996510006463	PAD	4
2	996510020935	FRONT DOOR	1
⚠ 8	996510020928	BOTTOM PLATE	1
A1	996510020943	ASSY - FRONT PANEL	1
AVCABLE	996510001106	VIDEO CABLE 1500mm	1
CARD	996510019880	Worldwideguarantcard	1
DBOX	996510021967	DISPLAY BOX	1
LBUFFER	996510020937	LEFT CARD	1
⚠ 13	996510001206	POWER CORD	1
QSG	996510021968	QSG	1
RBUFFER	996510021008	RIGHT CARD	1
RC	996510021964	REMOTE CONTROL	1
SERVICECARI	996500033761	SERVICE GUARANTEE	1
XP1	996510010962	5PIN CBL TJC3-5Y/SCN-5P L=90MM	1
XP2	996510012752	24PIN HS	1
XP3	996510020919	5PIN CBL PH-5Y/JC20-5P L=160MM	1
XP4	996510020921	6PIN CBL PH-6Y*2 20080#28	1
XP5	996510012698	HS 6P PH-6Y/JC20-6Y 150MM	1
XP601	996510020932	7PIN USB+KOK LINE PH-4Y/PH-3Y	1

SCREWS LIST:

No	12NC No.	Description	Q'ty
7	—	S/T SCREW B 2.6 X 8 BF	6
12	—	S/T SCREW B3 X 6 BF	9
14	—	S/T SCREW B 3 X 7 BF	5

DVP3350K/77 SERVICE PARTLIST

ELECTRICAL PARTLIST

No	12NC No.	Description	Q'ty
9	**996510020933**	**ASSY-MAIN BD**	**1**
20	**996510020922**	**ASSY-FB BD**	**1**
6	**996510020934**	**ASSY-SW BD**	**1**
19	**996510020918**	**ASSY-US BD (OK+USB)**	**1**
⚠ **16**	**996510021012**	**ASSY-PW BD**	**1**
10	**996510020923**	**LOADER**	**1**
OPU	996510020914	IM S76RFXP OPU	1

ASSY-MAIN BD COMPONENT PARTLIST

NO	12NC NO.	Description	Q'ty
D2	996510009667	SMD. SWITCHING DIODE LL4148	1
D3	996510009668	BAT54C	1
D5	996510020926	IC PESD5V0S1BA	1
D6	996510020926	IC PESD5V0S1BA	1
D7	996510020926	IC PESD5V0S1BA	1
D8	996510020926	IC PESD5V0S1BA	1
L10	996500014082	COIL CHOKE 10UH +/-10%	1
L9	996500014082	COIL CHOKE 10UH +/-10%	1
Q10	996510009671	PNP TRANSISTOR	1
Q11	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q12	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q13	996510010949	MOSFET AO3402	1
Q14	996510009670	TRANSISTOR SMT 3CG9012M	1
Q15	996510009670	TRANSISTOR SMT 3CG9012M	1
Q16	996510009670	TRANSISTOR SMT 3CG9012M	1
Q17	996510009670	TRANSISTOR SMT 3CG9012M	1
Q18	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q19	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q2	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q20	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q3	996510009671	PNP TRANSISTOR	1
Q4	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q5	996510009769	N Channel MOSFET 2SK3108	1
Q6	996510009769	N Channel MOSFET 2SK3108	1
Q7	996510009670	TRANSISTOR SMT 3CG9012M	1
Q8	996510009670	TRANSISTOR SMT 3CG9012M	1
Q9	996510009671	PNP TRANSISTOR	1
U1	996510010950	IC MT1389DE/L	1
U2	996510009674	IC AM5888IC	1
U4	996510009770	64M SDRAM EM638165TS-7G TSOP54	1
U5	996510020916	16M SPI FLASH EON	1
U6	996500032494	IC AS4558M	1
Y2	996510009675	27MCL20PF	1

ASSY-PW BD COMPONENT PARTLIST

NO	12NC NO.	Description	Q'ty
D1	996510011047	DIODE IN4007	1
D10	996500027866	DIODE SR360 3A/60V	1
D2	996510011047	DIODE IN4007	1
D3	996510011047	DIODE IN4007	1
D4	996510011047	DIODE IN4007	1
D7	996500014043	DIODE FR102 (FAST RECOVERY)	1
D8	996510011047	DIODE IN4007	1
L1	996510009942	COIL WIDTH	1
L2	996500032509	COIL SL0811-6R8K2R4	1
T1	996510010954	TRANSFORMER CONV	1
U1	996510010953	IC TNY176PN	1
U2	996500027867	PHOTOCOUPLER PS2561L1-1-V(WF)	1
U3	996500014609	IC AM431LP	1

ASSY-FB BD COMPONENT PARTLIST

NO	12NC NO.	Description	Q'ty
LED1	996510020917	J2808AG	1
REM301	996510020925	HM338-12 RECEIVER MOD H=12MM	1
U301	996510009665	IC ET6202 SOP-2	1

ASSY-US BD COMPONENT PARTLIST

NO	12NC NO.	Description	Q'ty
U200	996500032494	IC AS4558M	1

MECHANICAL PARTLIST

No	12NC No.	Description	Q'ty
RC	996510020927	REMOTE CONTROL	1
11	996510020929	TOP COVER	1
15	996510021009	BACK PANEL	1
17	996510006463	PAD	4
2	996510020935	FRONT DOOR	1
AVCABLE	996510001106	VIDEO CABLE 1500mm	1
ASSY1	996510020943	ASSY - FRONT PANEL	1
⚠ 8	996510020928	BOTTOM PLATE	1
⚠ 13	996510021007	POWER CORD	1
XP1	996510010962	5PIN CBL TJC3-5Y/SCN-5P L=90MM	1
XP2	996510012752	24PIN HS	1
XP3	996510020919	5PIN CBL PH-5Y/JC20-5P L=160MM	1
XP4	996510020921	6PIN CBL PH-6Y*2 20080#28	1
XP601	996510020932	7PIN USB+KOK LINE PH-4Y/PH-3Y	1
XS301	996510012698	HS 6P PH-6Y/JC20-6Y 150MM	1

SCREWS LIST:

No	12NC No.	Description	Q'ty
7	—	S/T SCREW B 2.6 X 8 BF	6
12	—	S/T SCREW B3 X 6 BF	9
14	—	S/T SCREW B 3 X 7 BF	5

DVP3350K/96 SERVICE PARTLIST

ELECTRICAL PARTLIST

No	12NC No.	Description	Q'ty
9	**996510021482**	**ASSY-MAIN BD**	**1**
20	**996510020922**	**ASSY-FB BD**	**1**
⚠ **16**	**996510021479**	**ASSY-PW BD**	**1**
6	**996510020934**	**ASSY-SW BD**	**1**
19	**996510020918**	**ASSY-US BD (OK+USB)**	**1**
10	**996510021481**	**LOADER**	**1**
OPU	996510020914	IM S76RFXP OPU	1

ASSY-MAIN BD COMPONENT PARTLIST

NO	12NC NO.	Description	Q'ty
D2	996510009667	SMD. SWITCHING DIODE LL4148	1
D3	996510009668	BAT54C	1
L10	996500014082	COIL CHOKE 10UH +/-10%	1
Q10	996510009671	PNP TRANSISTOR	1
Q11	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q13	996510010949	MOSFET AO3402	1
Q14	996510009670	TRANSISTOR SMT 3CG9012M	1
Q5	996510009769	N Channel MOSFET 2SK3108	1
U1	996510010950	IC MT1389DE/L	1
U2	996510009674	IC AM5888IC	1
U4	996510009770	64M SDRAM EM638165TS-7G TSOP54	1
U5	996510020916	16M SPI FLASH EON	1
U6	996500032494	IC AS4558M	1
U8	996510021013	IC PESD5VL4UG	1
Y2	996510009675	27MCL20PF	1
Q3	996510009671	PNP TRANSISTOR	1
Q9	996510009671	PNP TRANSISTOR	1
Q6	996510009769	N Channel MOSFET 2SK3108	1
Q15	996510009670	TRANSISTOR SMT 3CG9012M	1
Q16	996510009670	TRANSISTOR SMT 3CG9012M	1
Q17	996510009670	TRANSISTOR SMT 3CG9012M	1
Q7	996510009670	TRANSISTOR SMT 3CG9012M	1
Q8	996510009670	TRANSISTOR SMT 3CG9012M	1
Q12	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q18	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q19	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q2	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q20	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
Q4	996510009669	SMD.TRANSISTOR MMBT3904LT1 NPN	1
L9	996500014082	COIL CHOKE 10UH +/-10%	1

ASSY-PW BD COMPONENT PARTLIST

NO	12NC NO.	Description	Q'ty
D1	996510011047	DIODE IN4007	1
D10	996500027866	DIODE SR360 3A/60V	1
D7	996500014043	DIODE FR102 (FAST RECOVERY)	1
L1	996510009942	COIL WIDTH	1
L2	996500032509	COIL SL0811-6R8K2R4	1
T1	996510012665	TRANSFORMER CONV.	1
U1	996510010953	IC TNY176PN	1
U2	996500027867	PHOTOCOUPLER PS2561L1-1-V(WF)	1
U3	996500014609	IC AM431LP	1
D2	996510011047	DIODE IN4007	1
D3	996510011047	DIODE IN4007	1
D4	996510011047	DIODE IN4007	1
D8	996510011047	DIODE IN4007	1

ASSY-FB BD COMPONENT PARTLIST

NO	12NC NO.	Description	Q'ty
LED1	996510020917	J2808AG	1
REM301	996510020925	HM338-12 RECEIVER MOD H=12MM	1
U301	996510009665	IC ET6202 SOP-2	1

ASSY-US BD COMPONENT PARTLIST

NO	12NC NO.	Description	Q'ty
U200	996500032494	IC AS4558M	1

MECHANICAL PARTLIST

No	12NC No.	Description	Q'ty
11	996510020929	TOP COVER	1
⚠ 13	996510021478	POWER CORD	1
15	996510021495	BACK PANEL	1
17	996510006463	PAD	4
2	996510020935	FRONT DOOR	1
AVCABLE	996510001106	VIDEO CABLE 1500mm	1
ASSY1	996510020943	ASSY - FRONT PANEL	1
CON2	996510021468	CONNECTOR (L3-5Y	1
RC	996510020927	REMOTE CONTROL	1
XP2	996510012752	24PIN HS	1
XP3	996510020919	5PIN CBL PH-5Y/JC20-5P L=160MM	1
XP4	996510020921	6PIN CBL PH-6Y*2 20080#28	1
XP601	996510020932	7PIN USB+KOK LINE PH-4Y/PH-3Y	1
XS301	996510012698	HS 6P PH-6Y/JC20-6Y 150MM	1
⚠ 8	996510020928	BOTTOM PLATE	1

SCREWS LIST:

No	12NC No.	Description	Q'ty
7	—	S/T SCREW B 2.6 X 8 BF	6
12	—	S/T SCREW B3 X 6 BF	9
14	—	S/T SCREW B 3 X 7 BF	5

REVISION LIST

Version 1.0

* Initial release for DVP3350K/93 & DVP3350K/77 & DVP3350K/96